## The

# MOTOR OWNE

SOCIETY

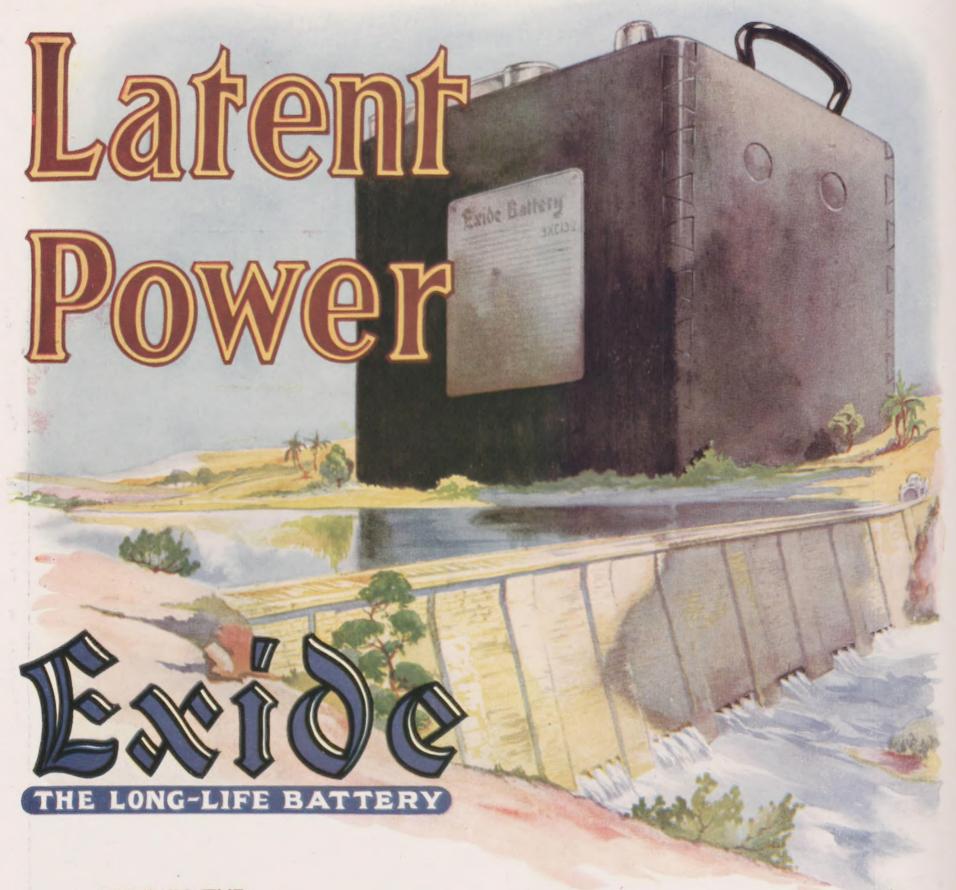
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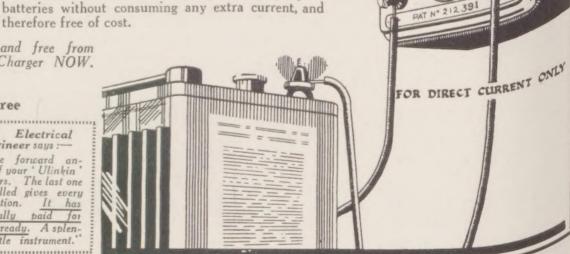
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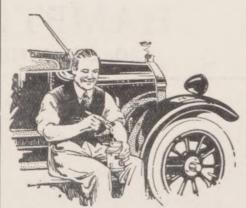
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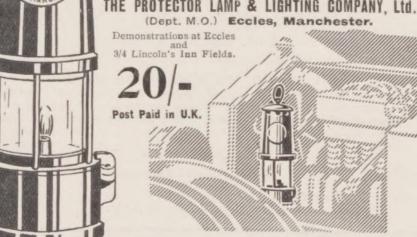
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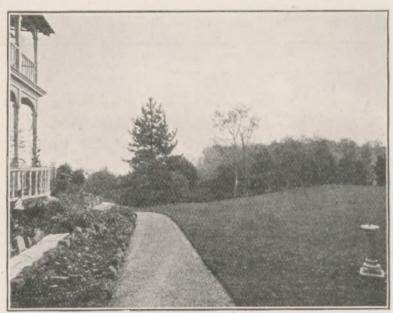
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MODEL

#### THE MOTOR-OWNER



VOL. VI NO. 67

DECEMBER 1 9 2 4

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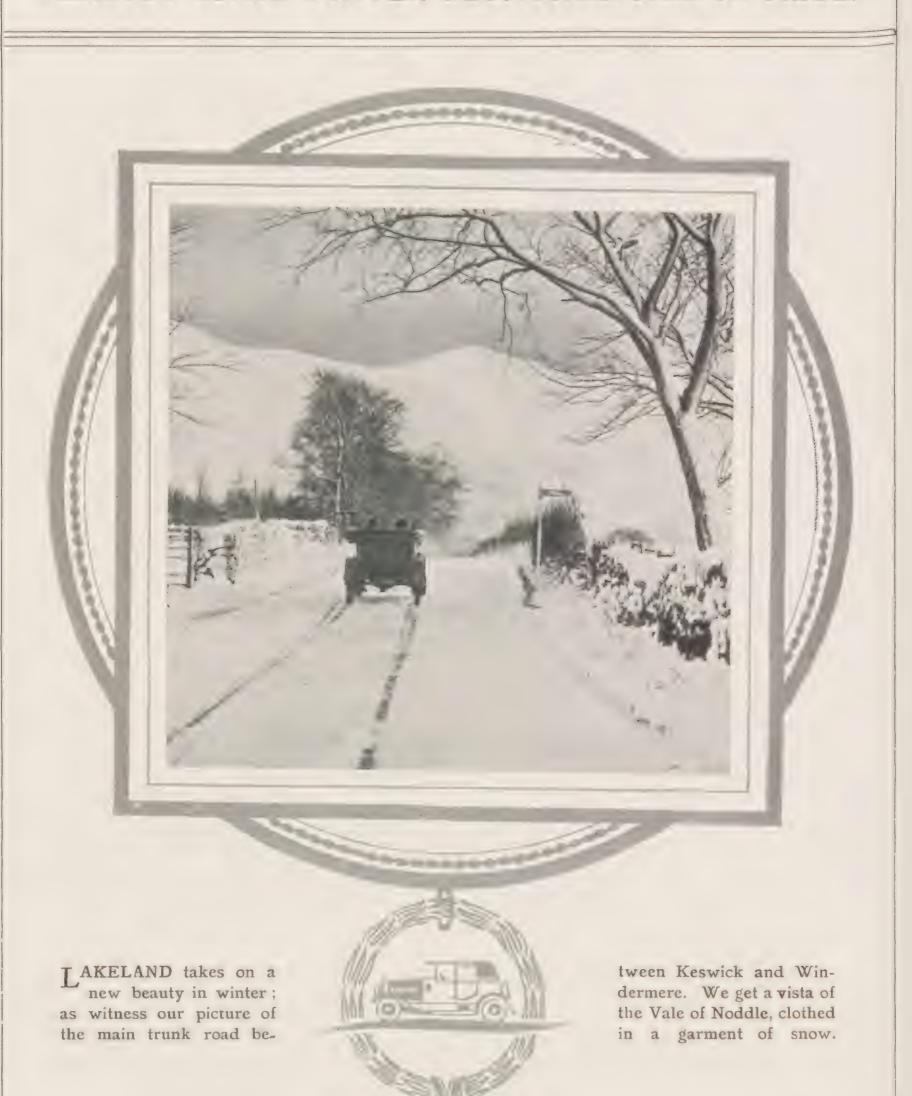
Subscriptions should be directed to the Publisher at the above address.

The Editor will be pleased to consider contributions of special interest to the car owner, provided they are of high quality and in every way suitable to the magazine. Short illustrated articles are preferred, dealing with any aspect of private motoring, either as regards touring or the home management of the car. First-class snapshots of roadside scenes or incidents are particularly desired. All photographs and sketches should be fully titled on the backs and bear the name and address of

the sender.

Contributions should be addressed to the Editor of "The Motor-Owner," 10, Henrietta Street, W.C.2, and should be accompanied by a stamped, addressed envelope. While every effort will be made to return them if unsuitable, the Editor cannot hold himself responsible in case of loss or damage.

#### "LASTLY CAME WINTER CLOATHED ALL IN FRIZE."





#### SEEN THROUGH THE SCREEN.

"The Motor Owner" offers Seasonable Greetings to all its Readers.



This Innocence.

OW refreshing it is to meet the occasional dreamer amongst the legion of hardheaded, materialistic beings who go to make up the mass of humanity.

For instance, turn your worldweary eyes upon that motoring idealist who, charged with scorching on a busy road, blandly disclaimed all knowledge of a 20 miles speed limit.

"Good gracious! I had no idea there was anything of the sort," he exclaimed. "I've frequently done fifty or sixty on this road."

Think of the gallons of ink which have been spilt in abortive attempts to abolish all speed limits, and the gallons of paint and miles of iron expended in signs to draw attention to them. Think of the army of policemen and the solemn Solons of Justice who have enforced them; the licences which have been endorsed; the false swearing of both delinquents and accusers that has taken place.

Ponder on all this, and marvel at the wonderfulness of the man who annihilates all troubles by the simple expedient of "Not knowing." It is magnificent, superb!

Has this gentleman heard, by any unforeseen chance, that Queen Anne is dead? Does he know that there is a Motor Show each year at Olympia? Has he any knowledge of the climatic vagaries of an English summer? We pause for a reply.

But stay, are we the victim of obtuseness? Can it be that this gentle motorist is by no means a votary of the turn-the-other-cheek brigade, but rather one who delights in protruding that cheek with his tongue? Was he in fact pulling the leg of the protesting policeman who pulled him up? Heaven knows! In any case, we view him with wonderment

#### King Petrol.

Day by day, that ex-friend of man, the horse, loses a trifle more of his kingdom to his all-conquering opponent, King Petrol.

For many years now equine aid has been dispensed with in most of the solemn functions of life. The doctor rolls up to assist at our birth in his limousine; the family car is pressed into the service of taking us to school, and carrying us to the church for the marriage ceremony; even the hearse which rolls us to "that bourne from whence no travellers return" is petrol driven.

The only vehicle which still retained the old-fashioned means of progression was the one which conveyed those of us who had transgressed—or perhaps we should say, those of us who had been found out in transgressing—from the Court of Justice to the Place of Detention. To-day the last outpost has surrendered at discretion. In future the Black Maria will be a motor carriage!

#### The World's Motoring in Figures.

Writing of the motor vogue in Great Britain leads by an easy gradation to a comparison of figures between motor traffic in our own country and other parts of the world.

The increase in motor vehicles of all kinds between the years 1914 and 1923 is truly marvellous. In the former year we are told there was a world total of 1,836,790; in the latter the figures had risen by no fewer than 16,186,775. A really stupendous advance.

Of the 1923 total, the United States claim 15,092,000. Great Britain and Canada combined possess 1,285,430 in nearly equal proportions. Three other portions of the British Empire count between them 211,560 in the proportions of Australia, 118,100; India, 48,600; New Zealand, 44,860. France had 444,800; Germany, 152,100; Japan, 10,500; the residue being divided between other countries for which the figures are not available.

And the sum total is always growing. It is stated that since these 1923 statistics were compiled motor

vehicles in this country alone have increased to 1,072,000.

#### The Car and Master Reynard.

It is always matter for regret when motorists, through inadvertence, give colour to the popular idea that they are inconsiderate concerning other people's sport.

We know that this statement is far from the truth where the great mass of motorists are concerned. Therefore we are sorry to hear that the meet at Newton of the Whaddon Chase Hunt had to be stopped by the Master, owing to the fact that cars had blocked the lanes and headed the fox.

No doubt this congestion was caused mainly by the chauffeurs of followers of the Hunt who had driven their employers to the meet, and were picking them up again at the conclusion of the run. We can safely leave the chiding of these men to their masters! But, apparently, there were some private motorists amongst the offenders, and we venture to think that these erred through ignorance, and not through any desire to be "non-sporty."

In their desire to see the fun, these private owners overlooked—or did not know—that they were not only blocking the way but spoiling the scent with petrol fumes.

Fox hunting particularly suffers from interference of this kind, owing to the fact that its venue is generally enclosed country intersected by many lanes.

On Exmoor, where they hunt the stag, notices are posted on the roads which approach the moor, requesting motorists not to go beyond a certain point when meets are taking place.

Probably this is inexpedient in more populated parts of the country, but, nevertheless, that does not exonerate users of petrol-driven vehicles from taking every care not to spoil sport.

We are sure this reminder will be taken in the spirit in which it is offered.



#### Seen Through the Screen.

Educational films concerning the functioning of various parts of motor vehicles seem to have come to stop, and the latest one, "Electricity in the Motor Car," is an excellent example of its kind.

The motion picture in question has taken six years to produce. It is the outcome of a desire on the part of the North East Electric Company to illustrate on the screen the operating principles of electric starting, generating, and ignition in the car.

The film is not intended for general distribution to the ordinary kinema, but will be loaned, free of charge, to technical institutions for the instruction and edification of budding motor engineers, and other students interested in the subject.

The history of electricity is traced from the moment when the ancients discovered that sparks were emitted when a piece of amber was rubbed with fur; down to Galvani's experiments with frogs, and so to Professor Faraday, the discoverer of magneto-electric currents in 1837.

Then, the working of the generator and starter, the production and control of the electric spark for igniting the gas in the internal combustion engine, are illustrated by a series of diagrams.

The subjects are presented with simplicity and clearness, yet the necessity for scien-

necessity for scientific accuracy is fully maintained.

#### What the Romans Commenced.

We have taken an early opportunity to motor over the reconstructed section of Watling Street between Dartford and Rochester, and the new Dartford "bypass," both of which H.R.H. the Prince of Wales declared open on November 19th.

A fine road, my masters, dating back to the Roman Era and now enlarged and levelled, and made fit for modern requirements at a cost of £1,000,000.

Those road-makers of old were direct in

their work. They just made a bee-line between the points they desired to unite, and carried their highway over hills and through valleys. No levelling for them, no improving upon Nature's handiwork. The legs of their Legions were wiry, their chariots strong, and the road-building was only undertaken as a means towards an end. Fighting was their trade.

We moderns have given up using our legs, and spare our chariots where we can. So we have cut through the hills, and filled up the valleys with the excavated earth. The result is this wide level thoroughfare, 11½ miles in length, with a maximum gradient of Lin 25

In sheer distance this reconstructed road cuts off three miles between London and Rochester, and if distance be reckoned by the time taken on a journey, the saving is incalculable, because it offers an alternative route to that section of the Dover Road which passes through the congested areas of Greenhithe and Gravesend.

#### Spanish Lady in Hammersmith.

Speaking from personal experience, we know of no better use for a car on these dark nights than to take it to Hammersmith, and put it on the rank of the Lyric Theatre, whilst its owner and his guests enjoy an evening with Sheridan's comic opera, *The Duenna*.

Motor owners who are so persuaded

will find themselves in most excellent company, both from the stage and auditorium point of view. The former, because Mr. Nigel Playfair has gathered together a brilliant and sweet-voiced band of players for this rollicking opera; the latter, because the enterprising and clever manager learned the secret of drawing crowds from the West End still farther West, by his former productions, Abraham Lincoln and The Beggars' Opera, to mention only two, and retains them with his present programme.

So far as *The Duenna* is concerned, this result has been achieved by joining Sheridan's witty lines to the tuneful music composed and selected by Mr. Alfred Reynolds; and by giving the joint interpretation to singers who can act, and actors who can sing. The two forms of artistry are apt to reside in separate houses, and—as they say in Suburbia—" keep themselves to themselves." However, at the Lyric they have been persuaded to live together in amity and concord.

So it is that we get such an ideal combination as Miss Elsie French, the Duenna, and Mr. Frank Cochrane, her lover the Jew Isaac Mendoza. Their duet and dance, with the Duenna occasionally lost in her hoops, is a thing of sheer joy.

Then there are those beautiful songstresses, the Misses Elsa Macfarlane and Isobel McLaren; and Messrs. Scott Rus-

Messrs. Scott Russell as Father Paul, Guy Lefeuvre as Don Carlos, and Nigel Playfair as the choleric father, Don Jerome, all bringing their best and brightest gifts to the interpretation of this merry and tuneful comic opera.

To Right the Wrong.

Compulsory insurance has been discussed often in THE MOTOR-OWNER. It is therefore gratifying to read the views on the subject of such a high legal authority as His Judge Cann. Honour is of the opinion that an Act making insurance compulsory for all drivers of motor vehicles would be most beneficial.



Winter Sports at St. Moritz and Pontresina: the Kronenhof Curling Rink, Pontresina.

#### A GOOD JOKE WHICH IS NO JOKE!



"Yes, Sir; I've got all the rattles out now-and this is what's left"



#### IMPROVING EXPORT POSSIBILITIES.

By Captain E. de Normanville.

There is a most promising pick-up in the export trade with British made motor cars. Here is a comparatively simple suggestion which, if adopted, would materially improve the prospects of further increasing that essential outlet of our production.

THERE are rumours in the air that it is the intention of the authorities to make a change in the existing method of calculating the horse-power of motor-cars for purposes of Treasury rating.

Rumour has been dubbed a lying jade, but I trust that in this instance she has become a reformed character; for a change from the present archaic and inaccurate system is long overdue.

At any rate, ground is furnished for the pious hope expressed by the additional suggestion that "the change will take the line of least resistance." This recognition of officialdom's general attitude may, therefore, be accepted as corroborative evidence in rumour's favour.

However, I should like to offer an alternative scheme which, whilst not detracting from the car's possibility as a "tax-getter," should prove to be of material help to the manufacturer, with an especial bearing upon his export trade problems. Before setting forth the scheme, I must make it quite clear that, although it is based upon existing tax values, I by no means agree that such values are best suited to national requirements. That, as Mr. Rudyard Kipling would say, "is another story."

It has, at last, been realised that it is a false basis for taxation to count the bore of an engine and ignore the stroke. Well, the remedy is obviously a formula which accepts the cubic capacity without interfering with the present financial results. My scheme, whilst admitting this new departure, offers an important amendment to it. Here it is. Make the change to a cubic capacity basis, but interpose a basic data line at an agreed point so that the power II h.p. shall be read as I4 h.p.

To make it clearer, let us take the most popular type of car, the "Eleven," reading its average cubic capacity at, say, 1,400 c.c. In this instance a taxation formula would be evolved on a capacity basis so that 1,400 c.c. engines would still pay a yearly tax of £11. Here we have the obvious solution: so many c.c., so many pounds in tax.

My suggestion is that cars should be divided into two classes, though the principle is sound in each sub-division. The first class to consist of cars under, say, 2,500 c.c., the second, of cars over 2,500 c.c.

In this latter class the change would only be in formula—a car rated now as 20 h.p. would still pay £20 a year in tax. In the "under 2,500 c.c." class, the formula should be so set as to allow our popular "Elevens" to still pay their £11 or £12 in annual tax, but they would be allowed to have a nominal rating equal to 14 horse-power.

To round off the scheme before dealing with its advantages in extenso, I must deal with the 7 h.p. class. In



"Oh, Bob dear, this is heavenly; kiss me again."

their case a simple expedient could be adopted. Why not have a minimum rate for four-wheeled cars, say £7 a year? Then the class in question would not be affected.

Now for the benefits which would accrue. As already stated, such a scheme would make the "Elevens" more saleable in the oversea markets. Why? Well, the eleven point something car of British manufacture has become a criterion of its class in the automobile production of the world. You cannot get better value for money. But in spite of their excellence they do not command their full share of export trade.

The reason for this is that the type of engine—not the power, this difference must be noted—is not quite suitable to the bulk of overseas road requirements. Here, a somewhat slower running engine with a slightly varied "torque curve" is wanted.

In case you have forgotten what the "torque curve" stands for, I may remind you that a rough and ready definition is—the change in relationship between "power" and "engine speed."

Now it is the limitations caused by the tax question which prevents manufacturers of "Elevens" from giving this necessary development to their class designed for export purposes. And, moreover, the minor structural alterations which would make these cars saleable abroad would improve them for home service. They would enjoy a longer life and diminish repairer's bills.

Of course it would be very pleasant to include all cars in this suggestion. But national revenue must be maintained, and the loss would be quite small if confined to cars of, say, 2,500 c.c. Besides, who am I that I should come between the Chancellor of the Exchequer and all his—shall we say—victims?

#### FROM ONE STEERING WHEEL TO ANOTHER.

S K I S A N D S E A S O N A B L E S U R R O U N D I N G S I N S W I T Z E R L A N D.







A T a time when Britons throughout these isles have a right to demand a landscape of purity the most immaculate, the weather forecast will most likely be: "Dull; some showers; local fog; slight frost at night." That's our usual Christmas weather; but we do sincerely hope that this year our gloomy forebodings may be unjustified. However, they manage things better in Switzerland, and the Briton who is fortunate enough to be able to is the first to take advantage of this better management.



#### WHO'S AWAY A-WHEEL?



1.—H.M. The Queen of Belgium chats with Pietro Bordino, the famous Fiat racing driver, preparatory to a spin round the roof track at Turin. H.M. The King of Belgium is seen bending over the car. 2.—Lord Louis Mountbatten and the Rolls-Royce car which was a wedding present from his wife. 3.—A new 20 h.p. Daimler car, with special body, recently supplied to the order of M. Hachisuka.

4.—His Excellency the Earl of Lytton, the Governor of Bengal, at the wheel of his 24/60 Sunbeam car, and his two daughters.
5.—His Highness The Rajah Sahib of Santosh at the wheel of his 40/50 h.p. Rolls-Royce car. The photograph was taken in Calcutta, the statue in the background being that of the Marquis Curzon, to commemorate his Viceroyalty of India.

#### PEOPLE AND THEIR CARS.



- 6.—Martineau de Hoz takes a pleasant ride in his Rolls-Royce car at Deauville.
- 7.—H.R.H. The Duke of York, with the Earl of Athlone and Wing-Commander Greig in an Armstrong Siddeley touring car at Brooklands racing track on the occasion of the Royal Meeting.
- 8 .- Miss Phyllis Dare, who, as many readers will
- remember, made a great personal success in "The Lady of the Rose," is hereseen with her Fiat Coupé.
- 9.—Miss Evelyn Laye, the celebrated actress, who is now scoring so highly in "Madame Pompadour," with her 10/23 Talbot car.
- 10.—Lord Dalmeny about to take a spin in his Rolls-Royce Coupé.

#### THE MOTOR-OWNER CUP AT

 $T_{
m club}^{
m HOUGH}$  the country "got going" in these islands the idea is one of primary appeal to motorists. How notable is the utility of a car in this direction can be gauged in a glance any fine Sunday morning at the enclosures and garage at the London Country Club at Hendon, where many dozens of cars bring their quota of sporting motorists to their golf, tennis, tea or dinner dance-or whatever the particular attraction may be. To encourage this country club idea amongst motorists, we offered a Challenge Cup for a tennis competition on handicap basis to the London Country Club. The coveted prize fell the first year to the wiles of Mr. C. T. Chamberlaine-whose skill had, perhaps, been a trifle underrated by the Handicapping Committee. Last year it fell to the undoubted prowess of Mr. E. J. Sampson.

This year a very popular win has been secured by Mr. W. M. Sherring, a player of considerable style and ability, who fought his way through to success from the owe 2/6 mark. Following precedent we shall have pleasure in presenting the winner with a



The winner of the "Motor Owner" Challenge Cap, Mr. W. M. Sherring, photographed with his hard-won trophy.

permanent memento of his achievement. The runner-up was Mr. A. Bennett, whose personality in style rather tends to hide some very telling strokes.

The question as to whether such a cup should be played for on a scratch or handicap basis is debatable. offered it originally on the handicap basis believing that such a (may we say it?) handsome trophy would attract good players and thus give the moderate ones an opportunity of improving their game by playing with more efficient players. Knowing, however, that there were variances of opinion, we left the matter this year to the Tennis Committee of the London Country Club, and agreed to accept their declsion. They reaffirmed the Handicap basis, and the event this year was remark. ably successful from all standpoints. The many good medium players had the opportunity of playing with such well-known exponents as Messrs. H. S. Owen, F. T. Stowe, V. Burr, and Lt.-Col. Inglis. The first three are all Middlesex county players, and Stowe (Middlesex captain) and Owen are the "first and Owen are the "first pair"; a strong combination.



A lightning first service ace from Sherring which got home in the tramline corner.



Mr. L. W. Wood, one of the semi-finalists, in a "courteous" pose which belies his aggressive play.

#### THE LONDON COUNTRY CLUB.



A difficult mid-court volley.



The winner and the numer up.



" Up, Guards, and at 'em!"





One of the few occasions when Bennett missed.



The winner depicts his characteristic service follow through.

#### MY BOOK FOR THE YOUNG.

By Captain P. A. Barron.

One Hundred Ways of Earning a Dishonest Living.

OME day I propose to write a book for the young. I shall entitle it "One Hundred Ways of Earning a Dishonest Living,' or, if my publisher thinks that is too long for a title, I may suggest "Help for Self-Helpers."

It will be a sprightly book, for you may have noticed that few things in life give us so much joy as stories of the witty victimisation of people who

think they are clever.

You must remember how all England rocked with laughter when our Criminal Investigators discovered that Scotland Yard had been burgled. was a real-life story just as delicious in its way as the fictional episode in "Raffles" which preceded the actual event.

You remember that the lovable thief "Raffles" lifted a number of valuable exhibits from the Scotland Yard Museum of Crime.

That story has always had charm to me, as has the deliriously pleasing incident in "Arsène Lupin." In this case you recall that the admirable French thief was tracked by the great Sherlock Holmes—and stole detective's watch while he was looking for clues.

But real-life stories are even better. I well remember that some years ago a very well-groomed man entered a West End jeweller's and purchased some costly trinket—one of the diamond and platinum trifles worn by the kind of woman whose value in full rig may safely be assessed as far above rubies-at any rate pigeon-blood rubies.

Having selected the gewgaw-a word, by the way, which according to the dictionary is "derived from givegove": something which was given or "goven"—the stranger paid on the spot, or at any rate on the counter, with Bank of England notes.

The jeweller bowed him out, and all seemed well.

Then entered a brisk person in a hurry and a bowler, and asked to see the manager. He presented a visiting card bearing some such name as "Inspector Sleuthy, C.I.D., Scotland Yard," and asked if the person who had just left the shop had made a purchase.

The manager, who was getting breezy, admitted that the customer had bought something of value.

"Did he pay for it?" asked the detective.

"He did, in Bank of England

"May I see the notes?" asked the seeker of clues.

They were produced and were examined with a magnifying glass.

"As I thought," said the detective, "you have been swindled. They are all forgeries. It is my duty to hold them as evidence. Now there is no time to lose. I know where I shall find that man. I have been watching him and I know his haunts. I want you to come to identify and then I



 $N^{ORTH}$  of Aylesford stands the famous Kits Coty House, an ancient cromlech which "seems like a monument erected by Time, to perpetuate the memory of his fight with eternity."

shall arrest him. We shall catch him red-handed with the jewellery on him.

What could the jeweller do but

obev?

The two hastened to a well-known London café. "There are two entrances to this place," said the detective. "You stand here, and if he comes out hold him and call the police. I'll go round to the other entrance and walk through. If he's here we've got him netted."

He darted off-and that was the last the duped jeweller saw of either the perfectly genuine Bank of England

notes or the valuables.

Inquiries at Scotland Yard, of course, disclosed that no such person as Inspector Sleuthy was known. The man had merely had a card printed to work the swindle, and the purchaser of the jewels was a confederate.

Some of you may remember the case, as you may perhaps recall the equally admirable exploit worked by another couple of well-groomed business men who did not follow the recognised ways of acquiring wealth.

In this instance one man entered a jeweller's shop to select an expensive ring. He found it very difficult to make up his mind, and at length said he would like to come in later in the day with his wife.

He was just leaving when the jeweller noticed that the very finest diamond ring was missing.

You can imagine the fluster, the indignant protestations of the stranger, the frantic interest of the assistants.

Then the coolness of the stranger returned. "To clear myself of your absurd suspicion, I demand to be searched," he said; so he was led to the manager's office.

No ring was found on him; he could not very well have swallowed it. There was nothing the mystified jeweller could do but apologise.

Now observe. Later in the day another customer entered and made a small purchase. While it was being wrapped up, he slipped a finger

#### WHY JEWELLERS PREFER GLASS COUNTERS.

carelessly beneath the edge of the counter and found, as arranged, the missing ring lightly attached with a blob of chewing gum. The confederate who was vainly searched had, of course, stuck it there.

Rather neat when you think of it, but I hardly think it would succeed again. Jewellers prefer glass counters

The best methods of making a dishonest living out of cars would, I think, make one of the most interesting chapters of my book. Many of them are quite old but are still worked successfully.

One is an adaptation of what was once known as "The Fiddle Trick."

Pawnbrokers were the victims, and the enterprise worked because it was based on the knowledge of human greed.

A shabby-looking individual would pawn an equally shabby violin for a few shillings. Later a person claiming to be a well-known dealer in antiques would enter. He would tell the pawnbroker he had discovered that a person, whom he named correctly, had pawned a violin. He wanted to buy it.

Naturally, the pawnbroker said that



The "Gran'mère du Chimquière" at the entrance to St. Martin's Churchyard, Guernsey.

it was impossible. The violin was held in trust and could not be sold.

The antique dealer became excited. He offered £30, £40, £100 for it. Eventually, he admitted that the instrument was a genuine Stradivarius

which might fetch a thousand. He had been tracing it for years and had at last tracked it to the poor pawner, who had no idea of its value.

He offered to share the proceeds if the pawnbroker would persuade its owner to sell and allow him, the antique dealer, to resell it in the best market.

The quite natural result would be that the pawnee would seek the pawner, and bid cautiously. The pawner would obviously say that the violin was an heirloom with which he did not wish to part except temporarily. There would be haggling, and eventually the pawnbroker would secure the "Strad" for forty or fifty pounds.

Simple, isn't it? And all done by kindness.

The shabby person and the socalled dealer in antiques would divide the money, and all the too-clever pawnbroker would have would be a worthless fiddle which could hardly be given away with a pound of margarine.

Very closely allied to this method of earning a comfortable and dishonest living is the second-hand car trick which has victimised dealers who have tried to be rather too clever.



Our picture is of one of Surrey's little known beauty spots, beautiful Friday Street, near Dorking.

#### REFLECTION.

The gift of country life, near hills and woods,

Where happy waters sing in solitudes.

John Masefield.

#### MOTOR OWNER

## THE CARE OF THE CAR— IGNITION SYSTEMS.

By Ronald Cann.

HEN a coil of wire is twisted between the two poles of an ordinary horseshoe magnet an electric current is generated as the wires cut the lines of force passing from pole to pole. The magneto makes use of this electrical fact, and also of another: when two coils of wire are wound concentrically about an iron core, sudden breaking of a current flowing through the inner coil induces in the outer coil another current of vastly greater intensity at the moment of breaking. The whole principle of a magneto is explained in these two sentences.

The magnets of a magneto are horseshoe shaped, and are made usually in two layers of hard steel, soft iron "pole pieces" being placed opposite one another on the insides of the open ends of the horseshoe. These pole pieces are concave in section, and are arranged to fit very closely round the armature, which revolves between them and carries the coils of wire. The armature consists of a flat iron core having convex side cheeks which fit closely within the pole pieces. The two coil windings are lengthwise over the flat part of the core, which is itself built up of thin insulated plates, these "laminations" preventing induced currents being set up in the core itself, with consequent heating.

Rotating the armature permits the lines of force to pass twice through the iron core in each revolution, and twice in each revolution the turns of the first or "primary" coil cut these lines of force and generate current.

The primary coil of the armature is composed of comparatively few turns of thick insulated wire. One end of the coil is earthed in the core itself, and the other is led to the fixed point of the two platinum points in the contact-breaker. When the current is flowing through the primary circuit travels through the coil, across the platinum points, and returns through the frame of the magneto to the other end of the coil. Just as the primary winding is cutting the greatest number of lines of force between the pole pieces the circuit is broken by the rocker arm of the contact-breaker passing over a cam, the platinum points separate, and current is induced in the secondary coil.

Before turning to the current in the secondary coil there are a few more considerations regarding the primary current. Though this is a "low tension" current it is quite capable of jumping the small

gap between the platinum points. Not only would this injure the points, but the induced secondary current would be poor, as the primary circuit would hardly be interrupted at all.

To avoid this a "condenser," consisting of a series of thin insulated plates attached alternately to the leads between the fixed and rocking platinum points, is fitted round one end of the armature. When the current is broken it flows from both sides into the condenser, which acts as a sort of shock absorber, and the breaking of the circuit is sudden and

The secondary coil is composed of a very large number of turns of very fine insulated wire wound over the primary coil, and fixed to the primary coil at the end nearest the contact-breaker. The other end is led to a brass "slip ring" from which the current is picked up by a carbon brush and taken to the distributor. Breaking the primary circuit causes a sudden intense "high tension" current to be generated in the secondary winding. This is picked up at the slip ring and led to the distributor, which acts as a rotary switch, and sends the current to each plug in turn along the high tension wire. The current completes the circuit by jumping the points of the sparking plug and returning to the secondary coil through the metal parts of the engine and magneto, and through the primary coil in the magneto.

An alternative return circuit is offered through the "safety spark gap," across which the current can jump if for some reason it cannot reach the plug. This gap is set rather wide so that it is not used except in emergencies. If there were no safety gap the magneto might be severely strained by the current striving to return through the insulation of the coils when no other route offered.

There are thus several exactly timed processes going on at once when a cylinder fires. As the piston in the cylinder to be fired rises to the top of its compression stroke the platinum points in the primary circuit are about to separate As they do so the carbon brush in the distributor passes over the metal segment wired to that cylinder, and the current takes the right course. After plug cleaning operations it is therefore essential to see that the high tension wires lead to the correct cylinders, or the spark may occur at the wrong moment in each, with lamentable results.

Shutting off the ignition merely offers to the primary circuit a shorter route that avoids the contact-breaker, so that no secondary current is induced when the points separate, and the engine stops firing. Hence, a lock in the ignition switch is effective as long as the bonnet is kept locked. If it is not locked a thief has merely to open the bonnet, cut the wire leading to the switch—and start the engine.

Coil ignition, which has lately become very popular, is similar in its essentials to magneto ignition. The coil consists of primary and secondary windings about a These windings soft iron wire core. behave in precisely the same way as do those in a magneto, the difference being that whereas the latter makes its own primary current, the coil system uses current from the accumulators, and depends upon the dynamo. Much the same method of breaking the primary circuit by means of a rocking platinum point is used, and the coil system has the advantage of being very accessible, while parts are easily renewed if a fault develops.

Starting is particularly easy with coil ignition, as the spark has a uniform intensity which does not depend on the engine speed for its "fatness" as does a magneto. But a magneto is independent of the condition of the accumulators, and it is important for users of coil ignition to keep their batteries always up to concert pitch, particularly in the winter months when much current is being used for lighting purposes.

A few drops of thin oil every two or three thousand miles are quite enough to keep a magneto in good order, and the platinum points of the contact-breaker and the carbon brush in the distributor should be inspected from time to time. If the points are at all rough or uneven they should be filed flat with a magneto file and the maximum separated condition be reset to one-fiftieth of an inch. If no magneto file is available a nail file makes a very good substitute.

In damp weather when the car has not been used for a few days it sometimes happens that the rocker arm in the contact-breaker sticks open, and the car will not start. This is due to the fibre bush of the rocking arm becoming swollen with the damp. Rocking the arm a few times will usually cure the trouble, but if it is persistent the bush should be reamered out to a slightly larger size.







#### WHAT A CONTRAST TO MOST ROAD CROSSINGS IN LONDON!



THE Hyde Park Corner crossing is one of the best regulated spots in London. In this photograph the roads look comparatively peaceful, but actually an enormous amount of traffic passes this point daily. And there is never any confusion.



supplied to dealers and garages in bulk, for resale through kerbside petrol plants, with the stipulation that "Shell" is to be stored and retailed separately-

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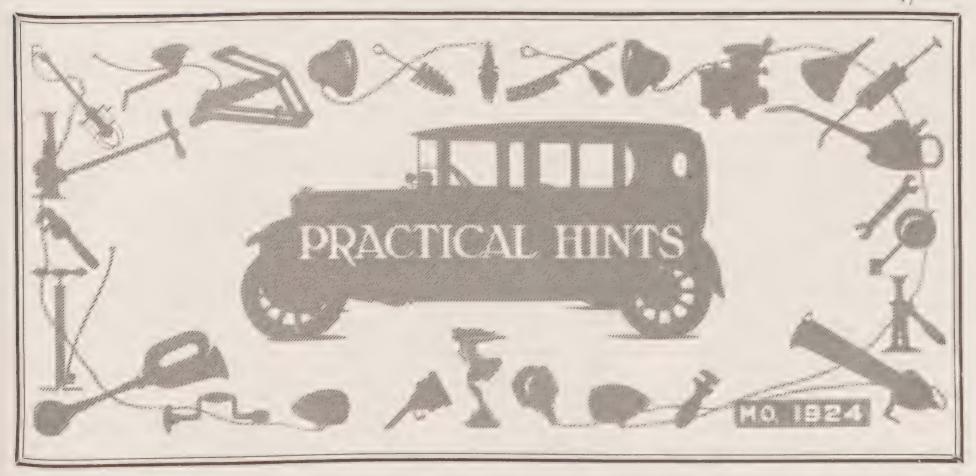
## BE SURE YOUR TYRES ARE BRITISH



## 'fit DUNLOP and BE SATISFIED'







On Learning to Drive.

-HE great influx of would-be motorists which has followed in the wake of the Motor Show has brought several requests for hints from novices desirous of learning to drive a car.

In the days that are gone, the first suggestion we should have offered these welcome recruits to our ranks would have been-"Buy a cheap secondhand car on which to try your hands and feet."

We should have followed this up by adding, "And when you have done your worst with it, find a purchaser who wants a third-hand derelict. What you lose on the transaction can be written off as part tutorial expenses.'

However, there are two reasons why such advice would not be sound nowadays. Firstly, the modern car is proof against all ordinary bad treatment. Secondly, a really good example is very much easier to handle than its ancestor.

So there is now no good and sufficient cause why the motoring novice should not take his first lessons on the car which he has decided to have "for ' Indeed, it is all to the good that he should shake down, as it were, with his future motoring companion.

Above all things the would-be driver should select a good tutor. And by that we mean one who not only knows how to drive, but one who also has the faculty for imparting his knowledge and dexterity to others. A skilled driver is by no means invariably a good instructor. He may be brimful of expertness, but ungifted in expression.

Of course it is possible that the

beginner may have a personal friend who will undertake his motoring education. Failing that, professional aid will have to be sought. Frankly, this wavers between the two extremes of excellence and uselessness. The agent from whom the car is bought will usually give rudimentary instruction in driving it, either as part of his service or for a small fee.

Then there are the motoring schools. Here, again, discretion must be exer-They vary considerably as regards their qualifications. Selection should be made from the list of approved motoring schools provided by the R.A.C. We have heard excellent reports of the Mansions Motor School and the British School of Motoring, amongst others.

The R.A.C., also, have trained tutors of their own, whose undoubted abilities are at the service of members, their families and servants, on payment of a moderate fee.

The next question which arises is as to the length of time it takes for a motoring neophyte, of average intelligence, to get an insight into driving. We think that about a dozen road lessons of one hour should suffice. To these should be added a similar number of indoor lessons on the chassis. its component parts, and the working thereof.

Thus equipped with the rudiments, the student can set forth to start really learning; for, after all, it is only practical experience which makes the ideal driver.

#### On Switching Off.

With the arrival of dark nights, the never-ending controversy "to switch off, or not to switch off," once more

We are afraid that the ruling of the Royal Automobile Club concerning the practice is by no means universally accepted.

In our nocturnal travels we notice that there is still a large percentage of the motoring public switching off their head-lamps when meeting another car. The practice should be discontinued.

The dictum of the R.A.C. was founded upon safety first principles which should appeal to all. But the fact is that the fetish that courtesy demands "switching off" under such circumstances dies hard. Although we are all out for road politeness, road safety must take precedence. And, moreover, nothing will convince us that driving into the absolute blackness that succeeds switching off is any more safe, or comfortable, than attempting to penetrate beyond the zone of comparative invisibility caused by approaching head-lamps.

In the latter case, the road beyond that "zone" is illuminated by your own lamps, and you can easily avoid the blinding effect by not looking directly at the other car's lights. This will enable you to see far enough for safety.

A few other hints for avoiding "dazzle" may prove acceptable. Holding the right hand at arm's length before the eyes will obscure the spot in your area of vision occupied by the blinding lamps. Then there are goggles on the market with two-piece lenses, one clear and the other smoked or coloured. By lowering the head the tinted one is interposed between the eyes and the glare.

Some drivers rely upon merely closing the right eye, claiming that

#### A FEW PRACTICAL HINTS

this simple operation obviates all inconvenience.

It is often possible to so steer the car that the lamps do not shine directly upon the approaching one. If both drivers can follow this procedure neither experiences any discomfort, and the safety factor is much higher than if either, or both, switched off. Of course, there is the midway course of "dipping" or "dimming. For ourselves, we incline to the former; but in selecting a particular device from the many available care should be taken that it is capable of steady variability between maximum and minimum intensity, so that the operator need dim his lamps no more than he feels to be safe.

A good dimmer can be made from a filament rheostat, obtainable at any "wireless" shop at about 3s. 6d. Interpose it in the battery-to-head-lamp wire. It is essential that the resistance coil should be capable of carrying the current—that is, the amperage—that is flowing over this wire, or it will heat up unduly, and melt the composition of which the article is made. The rheostat should be tested for this possible defect after it has been in use for a minute or so.

Probably it will be found that the dimmer can be fitted behind the dash-board by boring one hole, so that only the spindle and its knob project into visibility. A combined ebonite knob and scale can be used. They are very effective from the point of view of appearance.

On Choosing a Garage.

Amongst other problems connected with motoring, the garaging of a car is by no means the least important.

Those fortunate people who possess accommodation on their own premises are, of course, exempt from this particular worry; but there are thousands of others who are dependent upon outside aid in the matter. For such as these the following suggestions are penned, in the hope that they may prove useful. There is always a great temptation to accept the garage which is nearest to home or business, but motorists will be well advised if they do not place too much stress upon convenience as opposed to the general welfare of their cars. It is worth going a little further afield if by doing so greater advantages are to be obtained.

Speaking quite in a general sense, the larger the garage the better. Not that we suggest any inherent virtue in size alone; but a business that has grown from small beginnings has usually done so by coping successfully with its patrons' legitimate demands. However, that is also an argument in favour of the small garage which is on the upward trend towards prosperity.

If obtainable, a private lock-up is worth the extra cost. To possess one places the sole responsibility for scratched varnish and general damage on the owner's own shoulders, to say nothing of the added security for property left in the car.

In selecting a private lock-up, there

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are several points to be considered. First of all, space for easy manœuvring in getting in and out. Good clearance all round comes next. To speak of the necessity for ensuring good weather-proof qualities may seem to be guilty of a platitude; but even the most careful owner may overlook badly fitting doors in a private garage unless his car has suffered from such an infliction. Ours has!

Electric lighting, heating facilities, and a work bench are advantages not easily obtainable, but most desirable.

However, private lock-ups are very difficult to get. It generally means months on the waiting list, although, as we have indicated, they are well worth waiting for. Still, we must deal with the position when a motorist has to be content with just garage space. In this case the main point is to choose a place where the accommodation is thoroughly adequate, and one where dozens of cars have not to be moved before your own is gettable.

In some garages the proprietors resort to the objectionable practice of running the engine for moving their cars. Such establishments should be avoided. The best garages abstain from this proceeding.

Merely as a matter of interest, a curious point of law in connection with garaging may be mentioned.

A motor car cannot be held against rent due for garage accommodation, but if a bill is owing for repairs a car can be retained until payment is made: a very absurd legal anomaly.

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IS THIS THE LATEST

IN BALLOON TYRES?

#### LAUGH WHILE YOU CAN-EVERYTHING HAS ITS TIME.

-VOLTAIRE.

She: "I'm sure your clutch is all right, and the compression is beautiful!"





St. Peter: "So you were an automobile manufacturer—big mileage to the gallon, I presume?"

Applicant: "No, the least of any car made."

"Step right in."

#### THE AUSTIN "TWENTY"—AND A FAULTLESS PERFORMANCE.

"Driving comfort" is the keynote of the design of front seats—adjustable to individual requirements. Brake and gear



change levers are centrally placed—with air, ignition, and throttle levers mounted on the large steering wheel.



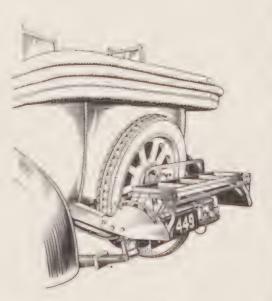
The all-weather equipment—of an unusually efficient design — is housed when not in use behind the back slab of the rear seats. Note the strong and adjustable rear passenger screen.

touring car can truthfully be described as one of the most attractive and generally efficient family cars on the automobile market of the present time—and "generally" covers a host of exemplary features. We ourselves have found Austin engine reliability to be of an unusually high degree, and its power and flexibility to be truly remarkable.

Rated at 22.4 h.p. the engine has four cylinders with detachable cylinder heads.

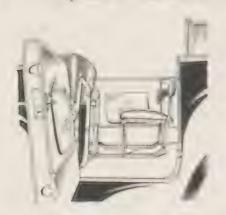
Rated at 22.4 h.p. the engine has four cylinders with detachable cylinder heads, aluminium pistons, while the crankshaft is carried on five bearings of large diameter, giving pronounced smooth running. The clutch is of the single-plate type, light yet efficient; there are four speeds forward and a reverse; and the suspension, with shock absorbers front and rear, is truly delightful. There is a transmission brake in addition to those fitted to the front and rear wheels.

Our two days' run—from London to Cambridge, Newmarket, halfway thence to Norwich, and back to London, with two passengers on the first day; and London, Eastbourne, Seaford, Lewes, Brighton, and London, with six passengers on the second day—constituted no easy task, consisting as it did of over 350 miles of variable roads on and off the beaten track; hills (Beachy Head on "third," with its hairpin bends and a load of six passengers, is surely a good climb?); really rough surfaces; fast roads (we attained 60 m.p.h. on a lonely Newmarket road), and from beginning to end the Austin "Twenty" made an absolutely faultless performance. The consumption figures for the trip are: fuel, 18-20 m.p.g.; oil, negligible; water, 1½ pints. Thus, in our opinion, the Austin "Twenty" deserves all the praise we can accede to it.



The luggage carrier on the Austin "Twenty" is one of the most sensibly designed and soundly constructed grids in existence. Note the method of carrying one or two spare wheels.

There are two occasional extra seats in the rear compartment, which may be folded forward when



not required—as illustrated. There are four doors with a large and useful pocket in each.

"LOOK HERE UPON THIS PICTURE, AND ON THIS."



#### MOUNTAINEERING BY MOTOR.

By E. M. Wood.

Alpine driving requires judgment and car knowledge, but apart from these two all-important factors, the sport offers no "thrills" other than the legitimate ones of a day spent with Nature at her grandest.

In a recent article in the Motor, entitled "The Best Way Across the Alps," Mr. Freeston remarks that "the great barrier of the Alps... is regarded by some as an inconvenient obstacle to be overcome, and more wisely by others as an illimitable field of touring

delights."

Did the latter class but know the joys of mountaineering by motor car, I am sure their numbers would increase enormously. To say nothing of the feeling of physical fitness mountain air brings to all who breathe it, mountain pass driving as a

sport has few rivals.

Any good car of 10 h.p. or over, providing it is in touring trim, is capable of tackling any of the Alpine passes between France and Italy or Switzerland. The engine should be free of carbon and pulling well, and, of course, the brakes must be in good order, for hill climbing is the finest efficiency test one can have, both for car and driver.

I have personally crossed the Col de Genèvre (6,100 ft.), the Lauteret (6,790 ft.), the Simplon (6,027 ft.), and the great St. Bernard (7,500 ft.) with a 10.4 h.p. two-seater Fiat when in its third year, besides doing the Ballon d'Alsace (3,750 ft.) and the Bracco between Sestri Levant and Spezia, as well as a small and very trying pass of Napoleon's behind Genoa, known as the Bocchetta, or "little mouth," presumably from its extreme narrowness.

None of these gradients, with the exception of the Bocchetta (1,839 ft.) are anything like as trying to a car as Porlock Hill, but as a test of good driving, by which I mean car consideration, they are perhaps greater, as one is climbing in some cases for over two hours, and a careless or inconsiderate driver, by a stupid use of his indirect speeds, will soon have a low-powered car boiling, especially if it is not in the best of condition.

Long descents are perhaps even more a test of good driving than the upward climbs. There is no room here for the driver who wants to "show off" without regard for his engine and transmission, though, curiously enough, the incorrigible Latin seems to produce a few! Perhaps

the sight of two lone, lorn females "stodging" up an Alpine pass filled them with a masculine desire to assert their superiority and shoot past round hairpin bends at what looked like a cool thirty!

The gradients in all the passes I have mentioned are excellent, and the Fiat did them all on third speed. Hairpin bends are frequent but never terrifying, and it was not once necessary to reverse round any of them.

To a beginner desirous of trying this sport I would say: see that your engine is well tuned and free of carbon, with the carburetter set for pulling rather than pace, that your springs and transmission are well greased, and your brakes in order. Last year in crossing the Lauteret, on my return from Tuscany, I had the misfortune to snap the cable of my foot brake in pulling up short to avoid a hen. There was no possibility of repairing it amidst Alpine snows, so I had perforce to descend with only the hand brake and



In the Vosges, near Ballon d'Alsacc.

the occasional use of an indirect speed when the pace threatened to become too swift!

Whatever the temptation, never take your hairpin bends at a more acute angle than circumstances enforce. Remember that continual turning whilst on the climb throws a big strain on the transmission, and after much mountaineering it is quite possible to pull a car out of torque, and re-registration of the differential is a costly job.

See to it that your tyres are in good order and not too worn to grip well should you encounter a strip of loose or greasy road. I have seen a perfectly good climb spoilt by worn tyres refusing to grip on a stiff gradient which a heavy shower had rendered greasy. Tyre bursts are not likely to occur if your covers are in good order and you drive the pace you should, but if you get one on the front wheel it is apt to be more serious on "the edge o' beyond" than on the Brighton road. Punctures from nails kicked out of the mountain dwellers' boots are a likely source of annoyance, but if you run balloon tyres and Pressurelastic or Rapson tubes, these nails will hardly penetrate the thicker surface offered.

If your car boils, don't fuss. Pull up near the first runnel of clear snow water (there will be myriads of these) and having allowed sufficient time for the engine to have cooled down without fear of cracking the cylinders by the addition of ice-cold water, give your machine a drink.

To women drivers I would say, if you own a high-powered car with the increased weight and length this implies, do not imagine that this is necessarily the best type of car for mountaineering. The increased comfort plenty of power gives you is more than compensated by the fatigue of hauling the additional weight and length round the bends. Far better flick round them in a Fiat!

Finally, if you desire to sleep in the primitive conditions high altitudes imply—and herein lies all the fun of life in the mountains—a small or moderate-sized car is far more likely to fit into the patron's barn—often your only garage—than its more lordly brother.

#### MOUNTAINEERING BY MOTOR.





Above: Silent sentincis in the mountain passes. The picture depicts the authoress in her Fiat car on the Simplon Pass.



A typical mountain scene—and how lovely!

From the high mountain roads one commands magnificent panoramas—La Vachette, from the Col de Genèvre.



EVER CHARMING, EVER NEW, WHEN WILL THE LANDSCAPE TIRE THE VIEW?"

—John Dyer.



#### THE MOTORIST AND THE SPOTLIGHT.

By W. Eric Jackson, LL.B., Barrister-at-Law.

The advent of the winter season will no doubt again bring into prominence the question of lighting regulations, more especially with regard to searchlights and spotlights. These necessary and useful accessories have come to stay, in spite of whatever lingering prejudice against them there may exist in official circles, and in spite of the fact that such lamps are not strictly lawful.

Tis interesting to note that, in one of the early editions of one of the legal text-books on motoring law, it is stated that the introduction of regulations prohibiting searchlights on cars was chiefly on account of the horse traffic. Searchlights were considered to be liable to frighten horses on the road and thus cause accidents.

Such legislation is therefore becoming fast out of date. The time is quickly approaching, if indeed it has not yet come, when public opinion will have so far changed that horse traffic will become a nuisance and a danger to the vast majority of motor-driven vehicles which now use the highways.

Clearly some alteration is needed, and will doubtless come. Meanwhile the luckless motorist who has the misfortune to be caught using a searchlight on his car will do well to consider the exact extent of the prohibition and to see what loopholes are left to him as a defence. Local magistrates are only too human, and therefore open to prejudice and the influence of public opinion. A motoring magistrate, probably himself a user of a searchlight, may be only too pleased to be assisted in finding a way through a somewhat inconvenient state of the law.

The prohibition against searchlights is not, strangely enough, contained in any Act of Parliament. It is contained in a Statutory Order issued by a Government department and dates as far back as 1904. The Local Government Board (now the Ministry of Transport) are, under the Motor Car Act, 1903, empowered to make regulations for the use and construction of motor cars. In pursuance of this power the Board issued in 1904 a "Use and Construction Order" the material part of which reads as follows:—

"Every lamp carried by the motor car when in use on a highway at any time during the period mentioned in this condition shall be so constructed fitted and attached as to prevent the movement or the use as a searchlight of the light exhibited by any such lamp." The "condition" referred to is part of the preceding paragraph of the order, of which the above quotation is a subsection. The condition refers to "the period between one hour after sunset and one hour before sunrise."

Searchlights therefore are not illegal if used during the normal hours of daylight. The mere fact, however, that the lamp in question is "con-structed fitted or attached" in such a way that it can be used as a searchlight is enough to render the owner of the car guilty. Generally speaking, it is only in the daytime that a policeman would notice how a lamp was constructed or fitted. And in the daytime the motorist is quite safe. He can flaunt his searchlight under the eyes of a dozen constables without fear of conviction. He can even use it, if the day is foggy and dark, and no legal consequences will fall upon him. When, however, the night legally commences, at one hour after sunset, it would appear that the mere carrying of such lamp becomes in itself an offence. It is not probable, of course, that any police officer would be so zealous as to arrest any motorist on such a flimsy

Besides, it is difficult to draw the exact line of division between lamps which are constructed and fitted so as to prevent their being used as searchlights and those which are not so constructed and fitted. What is meant exactly by the word "prevent"? Most lamps of every kind can be moved in some way or other, if need be, by altering the angle of the lamp bracket. So that it might well be said that no lamp is outside the prohibition.

No definition is given of what a searchlight is. Presumably, in view of what has been said above with regard to horse traffic, any lamp which is movable becomes a searchlight. And if every lamp is movable, then every motorist, almost without exception, is open to prosecution. Clearly this cannot be the intention of the law.

When, therefore, does a lamp become a searchlight? When does it become

prevented from being used as a searchlight? Would the tightening of the swivelling bolts be enough, or would the lamp need to be soldered in a fixed position? If the latter, why, we may ask, are stricter conditions imposed for searchlights than for headlights? Many headlights become "fixed" merely by the tightening of bolts and nuts. Why should not the same apply to a spotlight? An accused motorist might well contend before the magistrate that by tightening the adjusting screws or by tying the lamp with string he had prevented its being swivelled and had therefore kept within the law.

The Order prohibits the use as a searchlight of the light exhibited by the lamp. A motorist might therefore say that by switching the light off he had prevented the light being used as a searchlight. In any case, motorists may be assured that, whatever the construction or fitting of their lamps may be, it is only the use of them as searchlights that will incur liability.

Therefore, if the lamp is adjusted to the requisite angle and then switched on and the beam kept fixed the law is surely not infringed. A man can have as many fixed lamps as he likes upon his car and let them point in all directions without infringing any statute or order. A lamp which can be moved when not alight, and fixed when alight, ought therefore to be within the Order.

It should be noted that the prohibition refers only to lamps "carried by the motor car." Lamps detached and held in the hand cease, therefore, to be within the Order. It is strange indeed that if a motorist attaches an electric torch upon a swivelling arm to his car he becomes liable to penalties; but if he carries a torch in his pocket, unattached to the car, he can switch it on and throw the beam all over the road in any direction with as much effect and with more ease than if the torch were attached to his car, and yet in this latter case he is involved in no legal responsibility.

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### DISTRIBUTION OF WEIGHT.

By Wilfred Gordon Aston.

One of the most important considerations in a motor car, both with regard to stability, or road-holding qualities, and also in connection with the comfort of the passengers, is the distribution of the weight of its mechanism.

In the early days of the movement pioneer designers, almost without exception, realised the necessity for considering this question; and in consequence of that they nearly all adopted a construction in which the engine, which is almost inevitably the heaviest part of the chassis, was placed amidships. Subsequently this arrangement was superseded, not because it was wrong in principle—for that it was fundamentally right demands no further proof—but because it had disadvantages which at that time were very serious.

The petrol engine, now one of the most reliable prime movers in existence, was at one time characterised by a lack of reliability which made it the subject of endless jokes. It was, therefore, in the highest degree necessary that before anything else the engine of the car should be accessible for the purposes of adjustment. It was this fact that led to the idea, now almost universally adopted, of putting the engine under a bonnet. This practice was adopted in the original Mercedes car, which, by its amazingly superior performance, set a fashion to the rest of the motoring world. It was not long after it had made its appearance that the "engine

under the bonnet "notion was materialised on almost every other car.

The bonnet, to-day, may be asserted to be unnecessary. The owner of a good car knows that except in order to put oil into the engine it is very rarely indeed that the bonnet has to be lifted, and, so far as reliability of running is concerned, the engine could be placed equally well under the back seats. Possibly at no very distant date there will be a return to the amidships power plant, because, as I propose to show in this note, it is so good from the weight distribution standpoint.

of a car with an indication of the position of the centre of gravity. It will be seen that when the car is empty, presuming it to be fitted with an ordinary open four-seater body, there is a tendency for the weight to be a little forward of the centre of the wheel base. In light cars in which the engine is small, relative to the body, there will be a fairly even distribution of weight on all four wheels when the car is unladen, but with the full complement

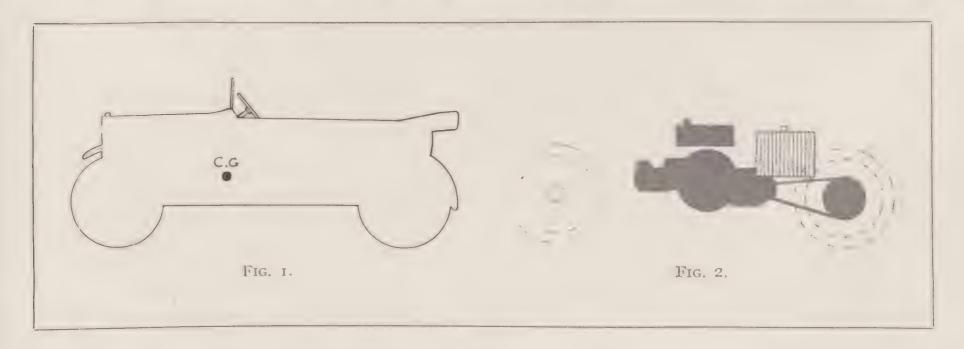
of passengers it is almost certain that there will be more weight on

the rear wheels. In some cars of a

In Fig. 1 I give a rough silhouette

sporting character in which a fairly large, heavy engine is combined with a light body work there will be a tendency for the centre of gravity to be rather far forward. Such a car will inevitably call for careful handling on corners, for the front wheels, which are truly rolling and also carry the greater part of the weight, will have a greater adhesion than the rear wheels, which are either driving or braking and carry a smaller proportion of weight.

It will not have escaped observation that in racing cars, designers of experience invariably do all that they can to get a uniform disposition of weight, as a result of which one finds that the engine is generally placed well behind the front wheels, whilst the driver and mechanic sit pretty close up to the back axle. It may be remarked that if the centre of gravity is taken too far back the results are no better than if it is too far forward. Everybody must have remarked the tendency for big limousines to skid on corners, a state of affairs which is accentuated by the fact that, owing to the weight and shape of the body work, which involves a good deal of glass and metal, the centre of gravity of such a vehicle





is not only well back but also high up. This last encourages the rolling motion which may easily be the origin of a skid.

The point, however, with which I particularly wish here to deal relates to the disposition of weight along the axes of the car. One can have an amidships position of the centre of gravity (a) by grouping all the weights together in the middle of the car, as indicated in Fig. 2, or (b) by putting some of the weight right in front and balancing it by another mass of weight right behind. Fig. 2

represents the conditions found in some of the ancient car designs, such as the Lanchester, the Duryea, the Oldsmobile and many others. Fig. 3 represents the case of the typical modern car. There can be no question but that, in principle, Fig. 2 is preferable to Fig. 3, for the simple reason that the moment of inertia of the car, as a whole, in that case is much less than in the other. This moment of inertia appears not only in the vertical plane but in the horizontal also.

A car with a lot of weight each

end is exactly analogous to a see-saw. When it pitches on passing over a road inequality there will be a tendency for the pitch motion to continue rather than to damp itself quickly out. Again, when such a car is taken round a corner its disposition of weight will cause it to act as a fly-wheel, and it will always try to overdo the turn instead of sticking to its natural track. If, on the contrary all the weight is placed amidships this fly-wheel action will be very small indeed, so that the car will be improved in stability.



Fig. 3.

#### A VERY APPRECIATIVE NOTE.

 $T^{
m HE}$  reproduction on our front cover last month, of the Temple of Erechtheus, at Athens, has brought forth the following appreciative note from a correspondent. He writes: "Allow me to thank you very heartily for, and to congratulate you upon, your beautiful reproduction in colours, on your current cover, of that gem of the world's architecture, the Erechtheum. I wonder how many of your readers know that an exact copy of this perfect specimen of Greek art can be seen in London! At the sides of St. Pancras Church, in the Euston Road, are replicas of this heathen, but beautiful, little temple. original is attached to the Temple of Minerva Polias, at Athens, and was built in the fifth century Before Christ-at any rate, the whole double building was not completed in B.C. 109, when a committee was appointed to report on its condition.

The style of the Temple to Erechtheus is in the Ionic

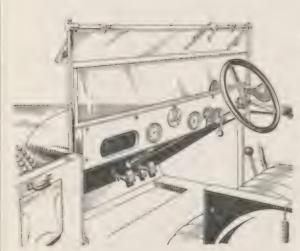
Hexastyle, and the building is executed in the finest marble. Its height (without the pediment) is 26 ft. 7 in., and the width along the front of the corona 40 ft. 6 in., thus forming an area of practically one square and a half. The height of the entablature is practically 5 ft., and the height of the columns 21 ft. 8 in. The pillars are of the form called Caryatides, being figures of females, instead of the more usual Atlantes, male figures, used as columns for supporting an entablature. Sometimes these represented Persians as a subject race, but the female form is more beautiful and more rare. The Erechtheum is recognised by students of art as one of the most delicate and charming pieces of Greek architecture, and its replica at St. Pancras Church adds one more point to your note (on page 13 of that number) anent the desirability of motorists taking note of the features of the wavside." E. W. R.

## "TWAS ON A DARK AND STORMY NIGHT!"



The Voice: "Do you even know where you are, John?"
"Why, yes!"
"Well,—that's something!"

#### THE II H.P. CLYNO - A CAR WHICH ASTONISHED US!



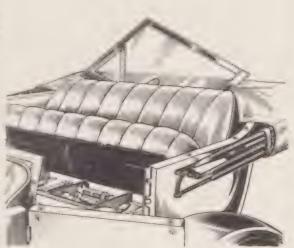
Depicting the neat dashboard, with useful parcels recess. Ignition and throttle levers are mounted on the steering column. Note the sunken foot rest, and the clear-view windscreen.

THE IT h.p. Clyno Car, in our opinion, is one of the most remarkable light cars in existence; a statement we make with no hesitation, having thoroughly tested this car's running capabilities to the minutest detail. Neither do we fear to remark that during our trial we found the Clyno to be, by comparison, truly and vastly superior to many cars of its class. Actually we had difficulty in realising, by its excellent performance, that it was only an "Eleven"; while the high quality of materials and finish generally—when only £195 is asked for the full four-seater model, with a magnificent equipment—gave cause for further astonishment.

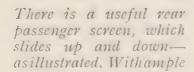
The 11 h.p. four-cylinder engine (with B. & S. of 66 mm. by 100 mm.; water-cooled, side by side valves, and detachable cylinder head) is little only in size, for its pulling power is amazingly big; you will agree that 50 m.p.h. with "four up" is a big and powerful pull! Cooling is by the thermo-syphon system and engine lubrication by plunger pump.

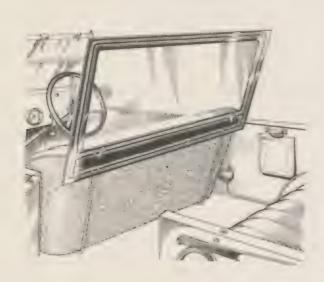
Many excellent features are embodied in the Clyno chassis, including their patent gearbox housing design which automatically takes up wear; simplicity of controls (right-hand change); single cantilever springs, giving delightful suspension; and pronounced ease of steering. In performance, we found it to be a

In performance, we found it to be a really fast car; a good hill climber; economical to run (40/45 m.p.g. and 1,750 miles to the gallon of oil); and an all-round attractive proposition. In addition, Clyno owners have one of the grea est service organisations—Messrs. Rootes, Limited—at their disposal; thus they may rely on reliable service after purchase, an all-important consideration.



Above is illustrated the tool compartment, beneath the rear passengers' seat, and the method of carrying the allweather equipment—behind the back slab of the rear seats.





leg-room and generous width, the bodywork is delightfully finished, and the upholstery is good.

## THE CLYNO CAR AT HATFIELD PARK.



Here we have fine craftsmanship and artistry evolved from the same raw material. Gates, the finest example of cast iron in Great Britain, and the magnificent II h.p. Clyno car; constituting great power enclosed in steel.

### MOTORING WITH EVE.

By Martin H. Potter.

No. 11.—From Cromer to Hunstanton, Castle Rising and King's Lynn.

We encounter Queens, Ancient and Modern.

VE describes Cromer as a beautiful damsel of ancient lineage who, whilst clothing herself in ultra-modern garments, has yet managed to retain in her attire something of the old-world atmosphere of her ancestors.

The hem of her skirt, where it touches the North Sea, is fringed by a fine parade, and is trimmed with splendid hotels and other appurtenances of a fashionable seaside resort, but the bodice (I do hope my masculine pen is doing justice to Eve's simile!)—her bodice, I say—if bodice is the correct word—is festooned with narrow, crooked lanes which can only be styled streets by stretching the elastic of courtesy to its utmost limit. However, this is not to say that they are not very charming lanes—to walk in.

Carpers might argue that Cromer is morbidly conscious of this shortcoming from the strictly motoring point of view; for not only do her signposts preface the request to "drive slowly through the town" with a "Please" on your entering, but they also "Thank you" as you leave.

Avaunt, ye carpers, if such there be;

Eve and I are firmly convinced that Cromer's signs are dictated by the good manners which it subtly puts to the credit of motorists. That "Thank you" is a mere trifle, but did not Macaulay define politeness as "benevolence in small things"?

We passed a few very pleasant days in this town by the sea. None the less pleasant perhaps because we shared it, practically, with its mere all-the-year-round inhabitants. The season had departed, taking with it the multitude of visitors.

Eve took me for long rambles round and about. We climbed to the lighthouse, and had the working of the lamp explained. We squatted on the edge of the sand cliffs, and watched the eternal battle between sea and land. The struggle, like human contests, teems with defeats and victories. Here on the Norfolk coast the sea wins, but the contest is unequal, for geologically Norfolk is but a child as compared with other parts of Britain.

Eve, the whimsical, revelling in her previous metaphor, said that Mother Nature has clothed it to correspond with its age—soft, golden sand and white, and sometimes red, chalk form the fabric of its garments.

So here the Ocean-destroyermakes an easy conquest, claiming the works of man for war reparations. Then light-houses, churches, and mansions are seized and devoured. Sometimes a wholesale indemnity is demanded, and an entire town is engulfed. For instance, somewhere about 600 years before Eve and I sat on the Cromer cliffs, the sea coveted the town of Shipden. That town is now buried under the waves half a mile from the present shore.

Yet, to be just, the Ocean-destroyer

takes but to give. What it robs from one spot it bestows on another, as witness the deposits on the shores of the Wash, to quote only one example. Then Man, the builder, laboriously sets to work again to reclaim and make more secure his heritage.

After a few days of such musings as these, varied by several strenuous sets of tennis, and more wanderings along the delightful coast, the motoring wanderlust seized us once more.

We bade farewell to Cromer and set the car going along the coast road which leads to Sheringham, Wellsnext-the-Sea, and Hunstanton. However, we diverged from this highway just beyond Runton in favour of a visit to Beacon Hill, which, quite erroneously, claims to own the remains of a Roman Camp, presumably with a desire to add to its attractions. Truth to tell, the ridge needs no such illusory aid. The wonderful view of hill and vale, road and woodland, and fine expanse of seascape it commands is sufficient warrant for its popular appeal. We stopped the car for a few minutes to drink in the beauties disclosed, and then went on by Pretty

Corner—a most aptly named spot—to the Holt Road.

Turning to the right, about a mile's run brought us to another alluring branch lane, which carried us back to the coast road by way of Beeston Regis with its ancient Priory. To the left again through Sheringham, once a there fishing village, and now a popular seaside resort, and so to Cley, which has reversed the process by declining from an important seaport to the status of a fishing village.

The way from Cley to Wells-next-the-Sea is a somewhat depressing one, for it is bordered on the



The picturesque quay and harbour of Wells-next-the-Sea.

ocean side by marshes, but Wells itself provides recompense to lovers of the picturesque. Eve and I were enchanted with its really beautiful quay and harbour. The present comparative lack of commercial use for these, although no doubt distressing to the business men of the little community, affords artistic joy to the artist. The long embankment, which stretches for two miles across the marshes from the town to the pebbly beach, adds a unique charm to the little decayed seaport.

We once more forsook the coast road after leaving Wells, to run round that delightful demesne Holkham Park, the family seat of the Earls of Leicester, one of whom in the eighteenth century created its fertility out of a sandy desert. We caught a glimpse in the distance of the obelisk erected in the park in commemoration of this great

agricultural achievement.

We completed our semi-circular digression at Burnham, but only touched the main road for a short distance, branching off again for the one which climbs parallel to it through charming country, to drop again a mile or so before it reaches Great Ringstead. And so by a part of Peddars Way near to Holme, and to the left for Hunstanton.

On Peddars Way we were running over a pathway which probably had its origin in prehistoric days. The Romans, those great road-builders, merely adapted and broadened it.

Hunstanton, unlike its sister Cromer, has grown up independently of its ancient beginnings. Whilst the latter

town has incorporated the parent fishing village into its core, Hunstanton has built up in front of it. So we have the old and new towns as more or less separate entities, each in its own way very beautiful.

This arrangement for expansion was no mere matter of caprice. The village was a mile inland, and naturally the sea brink, with its gorgeous sands and chalk cliffs, was necessary for the growing fashionable resort. The cliffs here are delightfully variegated in colour, red and white chalk and golden carstone mingling picturesquely in their make-up.

It was a matter of some difficulty to drag Eve away from Hunstanton, but we had a dinner appointment at King's Lynn that evening, and there was Castle Rising to see on the way. So having lunched, and devoted an hour to exploration, we set forth again.

The main road to King's Lynn, although bordered with fine scenery on its land side, is flat and uninteresting looking seawards. But there are side roads which run through the heart of the beauty and make but little difference in the distance to be traversed. We took these, running by le Strange Park to Sedgeford, Ingoldisthorpe, and partly round Sandringham Park, the lovely Norfolk home of H.M. the King, joining the sea road again at Babingley. A three-mile run from here brought us to Castle Rising.

Castle Rising is a very ancient town which affords yet another example of the vagaries of the sea. We have seen Father Ocean at other spots of the Norfolk coast as a merciless ravager; here he takes rank as a beneficent restorer. In very remote times the town was a seaport, but it now stands high and dry, two and a half miles inland.

And Castle Rising possesses the ruins of a Norman castle standing on a ridge facing the Wash, and, like most of its contemporaries, that castle has made history. Pages could be written upon the episodes its time-battered walls have witnessed, but there is one figure connected with it who stands out above all others—that of Queen Isabella, the guilty wife of Edward II.

Eve and I, standing amongst the ruins, pictured the feelings of the

fiery Frenchwoman who, somewhere about five hundred years before, had stood looking out at the fair country-side as we were doing; but, unlike us, not free to go forth and enjoy its joys. Imprisonment must have been a terrible punishment to this woman, to whom an active participation in the affairs of her adopted country had been as the salt of life. Condemned to inactivity whilst still comparatively young, alone with her thoughts of what had been, and what might have been to come.

Eve was afraid that the justice of the sentence would not tend to make it any easier for Isabella to bear. Here was no guilty woman come to repentance; rather one who, blinded by passion, would bitterly resent her withdrawal from the world with her work not fully accomplished.

If the wraith of her deposed husband, foully murdered at her instigation, visited her at Castle Rising, she would have no fear-no compunction. To her Edward II was an object of contempt, a weak man whose continued existence was a danger to the State—an unnecessary cog in the machinery of her ambition. Any tenderness which existed in her otherwise flinty heart was reserved for her paramour, Mortimer. Did she not plead for his life to her son, Edward III. Fair son, have pity on the gentle But the "gentle" Morti-Mortimer." mer was sent-most justly-to the hangman, and Queen Isabella to captivity

Then in the streets of Castle Rising, fresh from the thoughts of this bygone

wicked queen, Eve and I met a most gracious living one. She also came from over the seas. She was married to a King Edward, and exercised great influence on the affairs of her adopted country. She now spends a great portion of her life at a spot situated but a few miles from Castle Rising. there all resemblance This sweet lady ceases. has devoted herself to good works for the benefit of suffering humanity.

It was the nation's beloved Queen Alexandra returning to Sandring ham in an open touring car.



The ruins of Castle Rising, a Norman castle facing the Wash.

#### MOTOR OWNER 32

### WHERE KING PARLEYED WITH KING.

Tewkesbury, nigh 2,000 years old, the witness of many a ding-dong, gory fray, only naturally is redolent to-day of many a relic and echo of its grim and historic past. The "Bell" and the "Hop Pole," bespoke of Dickens and others, the Abbey, the Manor, the celebratea Bowling Green—they are all there for your inspection by way of the Broad Highway.

HEN a township or a family can trace definite differences of opinion centring around itself, its present and its antecedents, that town or family may be said to possess that most valued and sought after thing—to wit, a pedigree. Since quaint little Tewkesbury, away in the West, is frequently wont, in a backward glance, to pull itself up and interject with "Yes, the story goes or "That's the spot where old Canute disputed for the kingdom with Edmund (known as Ironside), and like historical interpolations, we must certainly pass its claim to a hoary old lineage. And a very fascinating and intriguing lineage it is, too.

It was at Tewkesbury in A.D. 44 that the Roman legions pitched camp, on the principle of "Here we are, and here we stay." It was Tewkesbury that, on May 4th, 1471, was a battle-ground of the Wars of the Roses, Tewkesbury that contributed half a century of volunteers to help repel the danger from the approach of the

Spanish Armada.

Motoring through the town to-day, hard is it to imagine that it was one of the key positions of the Civil War, and recognised as such by Roundhead and Cavalier alike. Indeed, it changed hands more than once. It was in the battle of May, 1471, that Queen Margaret's son, heir to Henry VI., was taken and done to death.

Some one of these buildings we may now explore in 1924 was the site, circa 724, of the palace occupied by distinguished Saxon nobles. The Manor, dating from the eighth century, had Royal Princes for its Lords in the twelfth and seventeenth centuries. Just there, on the banks

of the Severn, is where Edmund and Canute came to an amicable settlement of their differences as to who should control the country. The present Charter was granted by William III. as long ago as 1698; the first of five Royal Charters came from Edward III.

Under a Stuart favour Tewkesbury used to send two Members to Parliament. While it has lost the importance and dignity begot of this, its member to-day can certainly claim a privilege that even Shaftesbury, its most distinguished member, could never boast—that of being paid £8 a week for the duties of legislating. Yet, no doubt, Shaftesbury was better off, for heckling was not then the fine art it is to-day!

Outstanding as a monument of the town's early fame, and inspiration for more than the passing attention of the tourist, is the Abbey, claimed to be second only to Westminster in size, dignity and beauty.

Another fine relic of the past is a rare collection of half-timbered houses, prominent amongst them being the "Bell Hotel," the picturesque hostelry

where we must pull up and stay during the time that we are "doing" Tewkesbury. Quaint enough is it for the most pedantic and exacting seekers after the ancient, with its wall lamp, suspended bell, and cleanly, handsomely fashioned architecture and ample display of real oak.

Inside you will find a rich assortment of frescoes that date back centuries. Outside, and to the rear, you may exercise your skill at Drake's old game on the celebrated Bowling Green, referred to in John Halifax, Gentleman, as "a very nice place." The Nortonbury of this book, by the way, is Tewkesbury, and the house mentioned in it as being the residence of Abel Fletcher, the tanner, the "Bell." Part of the book was written not far away.

Turn to the "Hop Pole"—one of a very few "Hop Poles" in the country, surely!—and you turn again to literary recollections and revelations, for here is the house that Dickens mentions in *Pickwick Papers*.

The streets of Tewkesbury reveal several picturesque examples of

over-hanging old oak and half-timbered architecture, very dear to the eye that eschews the modern tendency to regard the Portland style as the beginning and the end of good architecture.

If the main road from north to south no longer passes through Tewkesbury, as it did in the coaching days, Tewkes-bury should certainly form a part of your voll itinerary, when would explore Gloucestershire for pretty runs and entertainment, by dip ping into the deeds and monuments of our forefathers. And when there make a note to put up at either the home of Fletcher, the tanner, or Dickens's "Hop Pole."



"The Old Bell Inn," Tewkesbury, is a very great attraction to visitors. It was the house of Phincas Fletcher, the character in "John Halifax, Gentleman."



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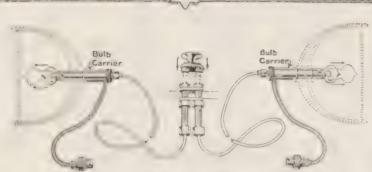
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The "A-L" Anti-Dazzle Focus Headlight Attachment. Sketch showing how it works.

## "The Best Dimming Device I Know."

That is how Lord Montagu described the "A-L" Focus Headlight Attachment in the June issue of "Woman." But it is more than a dimming device, as Lord Montagu goes on to explain. It gives the motorist complete control of the focus of his headlamps, by the easy manipulation of a plunger on the dash-board, from the normal long, narrow beam to a broad beam illuminating both sides of the road. Besides being a real anti-dazzle device, it is of the utmost service in fog or mist and when "cornering."

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## WARNING

In the High Court of Justice

CHANCERY DIVISION-Mr. JUSTICE EVE.

Between

FERODO LIMITED -

Plaintiffs

and

ALFREDO FERRARIS - Defendant

On the 30th October, 1924, at the Royal Courts of Justice, Strand, London, before Mr. Justice Eve, the above-named defendant Alfredo Ferraris of 10, Pancras Road, King's Cross, London, by his Counsel undertook that he, the defendant, his servants and agents would not pass off any fabric brake lining not manufactured by the Plaintiffs as and for brake lining of the Plaintiffs and would not sell or offer or expose for sale any fabric brake lining not of the Plaintiffs' manufacture under the name "FERODO" or under any other description calculated to represent that such fabric brake lining was the fabric brake lining of the Plaintiffs.

And the defendant was ordered to pay to the

Plaintiffs their costs of the action.

## NOTICE TO THE PUBLIC

WHEN ORDERING



You can make sure that you obtain what you require and thereby secure safety for yourself by seeing that the word "FERODO" is printed on any brake or clutch lining you buy. Do not be put off with any other lining. If you have any reason to suspect the genuineness of any FERODO LINING offered to you please communicate with Ferodo Limited, Chapel-en-le-Frith.

NOTICE IS HEREBY GIVEN that legal proceedings will be taken against any person who is detected selling under the name "FERODO any lining which is not the manufacture of Ferodo Limited, Chapel-en-le-Frith.

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#### OFM.ATTERSFEMININEMOMENT.

Gowns, Hats, Stockings and Wraps.

ERHAPS it is just as well for most of our exchequers that Christmas comes only once a year, for not only do the shops bewilder us with the wonderful variety of presents that almost dazzle our powers of selection, but an eye to our engagement list warns us that Christmas festivities will make serious demands

upon our wardrobes also.

Before the mother of the family hastens to Paddington or St. Pancras for the reception of youngsters fairly bubbling over with holiday enthusiasm she will be wise to settle the final items of her own personal needs. There is no doubt at all that as the season evolves Directoire ideas will assume an increasing importance, and the Josephine hat is very becoming to those who have already wearied of the turned up front of so many small velour models. Panne is one of the most successful materials for these high crowned hats, and the trimming beloved of the moment is of what might unceremoniously be described as the "double dustbrush" variety. It may be seen worked out in endless themes on all manner of hats. On the toque or turban it is across the back, standing out on either side, or it may be slightly at an angle; while with a small hat it may be worn up and down, at one side, or across the back or front, or one-half may appear above the brim while the other half slopes beside the wearer's cheek. On a Molyneux model of the Directoire type this feather decoration was dis-carded in favour of a huge flat velvet flower against the side of the crown, a little after the fashion of the feather pads, seen on a number of velvet shapes.

One very noticeable feature of the season is the close alliance between the evening gown and its accompanying coat, or wrap. At one time it was considered sufficient if these two garments had "something to say" to one another, but now the colour scheme. the style, the very materials must harmonise. For a fair woman, an exquisite example of this alliance was

carried out in a light Parma violet. The evening gown was of georgette, rather heavily embroidered in pearl beads, while the coat was of chiffon velvet, lined silver tissue and trimmed with broad bands of chinchilla. Similarly, a gown of night blue had for its escort a chiffon velvet coat with a deep hem of black velvet at the foot and wrists, as well as the collar, while decoration was effected by tiny gunmetal beadwork in a design that united the blue and black over a margin of some seven or eight inches.

Sombre in fact as our garments are in the day-time we have never had greater opportunity for enjoying a wealth of colour, or gorgeous materials at night. Even the "bridge coat" or home evening gown of velvet brocaded georgette, while simple in style, bears the note of the day in its extravagance of material. The manufacturers have never laid so great a selection before us since the War-and in a world of fashion our minds can hardly be expected to go back to pre-1914 ideas.

In the celebration of Christmases. however, the matter is entirely different; fashions change but slowly and traditions die very hard. To the youthful world the ever-recurring item of interest at this season becomes the stocking, but even this all absorbing matter does not exclude the desirability of little party frocks. For the toddler there is a return of the "smock," in crêpe de Chines and washing silks, suitable either for the little boy or girl up to a year or so, but after that it seems a pity not to give each the benefit of more individual garments. One suspects that the little girl who is constantly dressed like her brother—a fashion that one regrets to see on the increase—is losing instinctively some of the joy in her own diminutive charms of embryonic femininity, and certainly it cannot be said that the modern frock is in any way hampering or discomforting to its wearer even in the most vigorous

There is, of course, nothing prettier

than the pleated frock for best occasions, but where constant washing has to be considered frills are easier to negotiate, or even godet pleats let in to the brief skirt with an engaging little suggestion of flare. For the most juvenile occupants of the nursery the fashion for "woollies" of every description was greatly stimulated by the Royal favour bestowed upon them recently, and medical authorities assert boldly that if they became universal there would be fewer delicate babies. It seems an extraordinary sign of the times that juvenile modes are displayed at some of the dress shows on tiny mannequins, who play their part with amazing skill and assurance, but one cannot help wondering what the effect will be on them in later years. For the time being they are rather like delightful dolls, and the mere mention of dolls brings us promptly back to the subject of Christmas presents:

Offerings to-day are often of a much more intimate character than our mothers would have considered seemly, and in Bond Street a delicious Rose du Barry dressing gown of chiffon velvet, the short sleeves like the neck fur trimmed, frankly announced itself

as a desirable gift—which in truth it was. A diminutive counterpart would have fitted a dainty little daughter of nine or ten. Lingerie, in crêpe de Chine or georgette, silk stockings, and scents are all bought freely on these occasions, and in an age when the details of dress have reached such epicurean heights as the present, most of us would be more grateful for these practical offerings than for the elaborate white elephants that were once considered decorous to the occasion. But while on the subject of scents and powders it should be added that the last word in colour schemes hails from New York, and for evening purposes a lemon coloured powder is used, while either for day or evening a tangerine

lip-stick has been found to bring out the natural colour of the lips better than the various accepted shades of

carmine.



## THE FARE OF MOTORING FASHION.



This exquisite coat of specimen Leopard skins, with collar and cuffs of natural Red Fox—lightness with warmth—is equally ideal for motoring or walking.

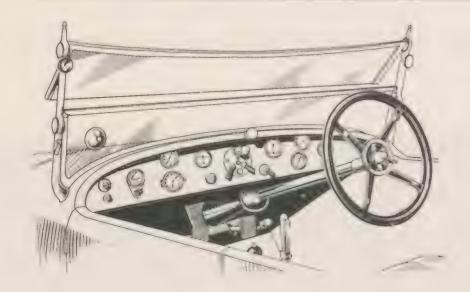
## MOTORING FASHION FOR THE FAIR.



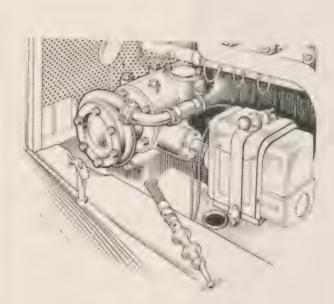
Here is another dual purpose wrap, of selected golden Nutria skins, beautifully stranded with soutach braid. Both examples are by Isobel, London and Harrogate.

## THE 37'2 FARMAN—A MECHANICAL THOROUGHBRED!

The instrument board is fitted with almost every conceivable and necessary accessory—clock, speedometer, oil and petrol gauges, ammeter, revo-



lution counter. Note the two-horn operating button over the dashboard; the doubly adjustable windscreen, the generous body dimensions

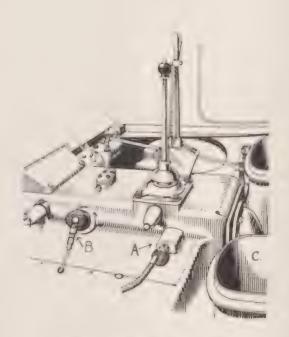


Above is clearly depicted the water circulation pump, the generator and the automatic oil filter (shown detached and laying on the chassis frame)— everything is designed with a maximum of accessibility.

h.p. Farman is a car—nay, a super car—with many exquisite mechanical features. We say "exquisite" for the want of a better word that would emphasise its pronounced exclusiveness, the cleanliness and cleverness of design, the skilful workmanship, and its amazing and enormous power-developing qualities. From a gentle "plaything" in London traffic to a fiery 80 or more m.p.h., it is a matter of mere depression of the accelerator pedal; and the manner in which it gathers speed is truly thrilling. Moreover, it is as reliable and simple to control at high speeds as it is in London's traffic game of "Stop—go on—stop." At no speed is there that horrible period of anxiety due to high speed wobble and vibration, so remarkably well does it hold the road.

Silence is a pronounced feature throughout; but especially is this so in regard to the gears. This is due to the fact that "second," "third," and constant mesh gears are helically cut, while they are lubricated by oil from the engine pump. The six cylinder engine with a bore of 100 mm, and a 140 mm, stroke, overhead camshaft, will develop 100 b.h.p.; while the maximum engine revolutions are approx. 2,500 p.m., so that at the fastest travelling speeds there is no undue racing, thus ensuring longer life and reliable running qualities. There are two sparking plugs to each cylinder, with ignition by H.T. magneto, and independent coil and distributor. Semi-elliptic springs at front, and cantilever at rear, with shock absorbers at both front and rear, the suspension is delightful, with an entire absence of road shocks. Four wheel brakes are fitted, actuated by Servo mechanism; and these, when applied, while bringing the car to a standstill in a surprisingly short distance, are gentle in operation.

In a few words, then, the 1925 Farman is a "mechanical throughbred," possessing all the grace, the poetry of motion, and the energy of the pure born—and the Farman is, undeniably, one of the purest born products of the automobile industry.



Gear changing is simplicity itself — almost fool proof! Note (A) the speedometer drive, (B) the automatic tyre pump, a standard fitting, and (C) the tool compartment situated beneath the driving seat.

THE GRACEFUL AND THE PICTURESQUE.



THE 37'2' H.P. FARMAN AT PICTURESQUE QUAINTON.



A delightful background to a no less delightful car.

OF its many excellent features, grace, power, silence, and strength are the most pronounced—and in each of our pictures the former quality is conspicuously illustrated. Now read (on the opposite page) of the other outstanding points of this high-class car



Truly off the beaten trackat Long Crendon, Thame.



### A CHAIN OF ARCHITECTURAL GEMS.

By Clive Holland.

A Delightful Tour in Cathedral Wonderland.

RECENTLY a great Archbishop—who incidentally is a motorist—was lamenting that so many railway travellers know nothing of the country through which they pass, or of the historic cities and cathedrals they see from the railway carriage windows. Although, perhaps, to some extent the same complaint may be made of the average motorist, especially he and she of the "speed variety," the motor has undoubtedly done much to make people better acquainted with their own country. The opportunities to become so are indeed unlimited. While the railway runs along prescribed lines the motor can go anywhere, and permit its owner or user to see everything.

In winter touring is less popular, of course, than in spring, summer and autumn. But fine days, especially if there be a little "snap" in the air and a corresponding absence of mud from the roads, will always lure the enthusiastic motorist along the highways and byways.

One desirable thing for touring in winter is an objective day by day which will afford comfortable quarters at night, with a possibility of some sort of amusement in the evening should one desire it.

A considerable experience of Cathedral cities has served to make us think that on the whole one meets with more solid comfort—even if it be rather of the old-fashioned sort—in these than in similar sized towns of a more rural or industrial character. Is it that, as of old, the Fathers of the Church are still good judges of creature comforts, and that hostelries in centres where they flourish, and have flourished for ages, seek to provide for the little and more material weaknesses of "the Cloth"?

A delightful chain of Cathedral cities tempts the motorist north-westward, and westward from London.

Oxford is but a pleasant spin out of town on a fine day (the road is well known) by way of High Wycombe, Princes Risborough, and then cross country through Bledlow, Thame, Wheatley, and Littlemore into the University city.

Modern as present day Oxford is in most of its essential characteristics—so that, as one American said this year, "its ancient colleges seem somehow out of the picture"—it still possesses the lure of beauty, good learning, and amidst its many gems of architecture that of Christ Church Chapel, which since the

middle half of the sixteenth century has served the diocese as its Cathedral Church. Of beautiful Norman architecture, with its exquisite canopied tomb of St. Frideswide, it still bears many traces of the munificence of that alluring and dramatic historical figure, Cardinal Wolsey, in the days when he, remembering the city as his Alma Mater, enriched her by founding the Cardinal College. The Cathedral, formerly the Church of the Priory of the saint we have named, is far more ancient than even the venerable College with which it is linked.

The saint, a daughter of Didan, Earl of Oxford in 727, who became governess of the Priory, was apparently a very attractive woman, for notwithstanding her sacred calling—and enforced celibacy—she was much sought in marriage. She had to hide from one of her persistent suitors, the Earl of Leicester, who threatened to burn the city if she did not come out of hiding and give herself to him. In those days fierce passions and cruel vengeance reigned, for King Æthelred II. ordered a massacre of the Danes on St. Brice's Day in 1002, and numbers were slaughtered in the church



Salisbury Cathedral is of surpassing heavity, and its lofty, slender spire rising 404 ft. from the ground is a landmark for miles around.

itself where they had taken refuge, many being burned in the tower.

The great Wolsey himself, accompanied by Queen Catherine, came to visit the shrine of the saint in 1520, and was struck by the beauty of the situation of the church with its surrounding green meadows.

There are many beautiful things to note in the church, among them the remarkable "Watching Chamber" of the shrine of the saint; the beautiful choir, with its finely wrought Tudor ceiling; the scant remains, outside, of the small Saxon church; the beautiful stained glass windows; the fine Chapter House doorway; and the carved woodwork of the Latin Chapel dating from Wolsey's time.

One should see Beaumont Palace, in which the Angevin kings once lived and where Parliament frequently met, for it is a perfect specimen of thirteenth century Gothic architecture.

In Oxford it is not difficult to find one of those "pleasant inns where comfort dwells" of which old-time travellers used to sing.

It is a pleasant road to Cheltenham by way of Shipton, Bourton, and Winchcombe. From Cheltenham one gets a good road west to Gloucester, which is a picturesque city and port, standing on the left bank of the Severn and on the Berkley Canal, which serves to connect the docks with those at Sharpness in the Severn estuary.

One can spend a very pleasant day in Gloucester exploring its many picturesque corners, and the Cathedral is one of the most charming in its architecture in the West Country. It was formerly the conventual church of a great Benedictine Abbey dedicated to St. Peter, and it possesses some unique and wonderfully beautiful features. Indeed, some authorities are of the opinion that in its south transept one finds the cradle, as it were, of the Perpendicular style of architecture, dating from 1330. The lofty and impressive choir remains undoubtedly one of the most magnificent survivals of the Middle Ages, with its Perpendicular work superimposed over the Norman. There are many features of great interest, including one of the most ancient of War memorials, seen in the east window. to local soldiers who fell at Crecy in 1340. The wonderful great Cloister, in which there is fine fan-tracery, dates about forty years later. The tomb of

#### MAGNIFICENT EXTERIORS AND BEAUTIFUL INTERIORS.





FEW more beautifully environed cathedrals exist than Christ Church, Oxford (top left), in which Charles I gave thanks for his victories over his enemies. It was originated by Cardinal Wolsey, and was raised to the status of a cathedral by Henry VIII. Gloucester Cathedral (top right), once the church of a great Benedictine Abbey, has a majestic square tower, which dominates the valley of the Severn and forms, as it were, a lighthouse for the surrounding country, and other distinctive characteristics. It is one of the most beautiful conceptions of the Middle Ages. Bath Abbey (centre) was commenced by Bishop



King and Prior Birde in 1500. It stands on the site of a great Norman Cathedral built by Bishop John de Villula of Tours, chaplain of William Rufus. Bristol Cathedral interior (bottom left) is spacious and impressive, with a fine reredos and graceful clustered columns. Bristol became an Episcopal See, with the Chapel of the Augustinian monastery as Cathedral, in 1542. The beautiful interior of Salisbury Cathedral (bottom right) never fails to charm and arouse the admiration of visitors. Salisbury is the Melchester of Thomas Hardy, and Anthony Trollope put it in his novels thinly disguised as Barchester.





Edward II was in ancient times a great

place of pilgrimage.

There is much work in the building of Serla, who was appointed by William the Conqueror Abbot of St. Peter's in 1072. It is said that it was in the Chapter House that the King decided upon the compilation of the Domesday Book. And in this great and beautiful fane on October 28th, 1216, the boy King, Henry III, was crowned amid scenes of the greatest rejoicing, and festivities held in the presence of the greatest nobles and clerics of the realm that must have made the old city gayer than it had ever before been or has been since. In the great Hall of the Abbey were held the Parliaments of Henry I, Edward I, Richard II, and Henry IV and V; whilst another historic event, the martyrdom of Bishop Hooper, took place at the stake just outside the Cathedral.

In days more remote than the seventeenth century Gloucester was often the scene of violence, and when the substitution of the Benedictine rule for that of the secular clergy took place the alteration was so resented by the citizens that many of the monks were persecuted and slain. One, Wulphin de Rue, a powerful noble, slew seven in the streets of the city, and as an atonement was made to maintain seven at his own expense in the Monastery.

It was the Abbot Seabrooke, died 1457, who commenced the beautiful central tower, committing the task of finishing it to a monk, Robt. Tully, who may possibly have been the architect. A Latin inscription over the arch of the tower in the choir runs (translated):—

"This fabric, which you see accurate and neat,

The Abbot charged the monk to make compleat."

The features that confer upon Gloucester much of its distinction and charm are, among others, the richness of its vaulting, dating from the early fourteenth century; the splendid East window, said to be the largest in the world, and filled with exquisite ancient glass; the quaint stall seats (note the knights dieing, another beheading a giant); and the whispering gallery, with its quaint inscription:—

"Doubt not but God that sits on high Thy secret prayers can hear, When a dead wall thus cunningly Conveys soft whispers to the ear."

The great cloister is of sublime beauty. To the south are twenty stalls or carrels in which the monks were wont to read and write. In these cloisters Cromwell stabled his horses, with the remark that "Gloucester has more churches than godliness."

The crypt, which is especially notable, forming as it does one vast underground

church beneath the choir and aisles, is generally agreed to be Norman, and ranks as one of the four apsidal crypts in this country. The others are Canterbury, Worcester and Winchester.

One leaves picturesque Gloucester and turns southward through the beautiful Vales of Gloucester and Berkeley to Dursley, Thornbury and Patchway into Bristol.

A great and ancient port, Bristol is rich, as are also many Continental cities on great rivers or near the sea, in architectural treasures. It has been chiefly indebted for its beautiful churches to great baronial houses, among them the Earls of Gloucester and the Berkeleys.

The Cathedral, though not large, will repay a visit and attention. It was founded as a chapel of an Augustinian monastery of Black Canons in 1142. The founder of the monastery was Robert Fitzharding, a Bristol burgess, who was descended from the Danish kings, and the founder of the Berkeley family who still live at Berkeley Castle. Bristol became an episcopal See, with the Abbey Church as its Cathedral, on the Dissolution of the Monasteries in 1542.

The Cathedral lost its Norman nave because it had been permitted to fall into such decay, but it contains many features of great interest. The wonderful Norman gateway of the old Abbey, leading into College Green, is one; and the central Norman tower, restored in the Perpendicular style, is another, with the White Rose of York among its decora-Bristol suffered much during the Reform Riots of 1831, and the Chapter House, one of the finest specimens of Norman work in all England, was greatly mutilated. The stained glass of the great East window never fails to excite the admiration and wonder of all who see it "like an inestimable treasure of precious stones, and with all its brilliancy as soft as rose leaves," is considered to date from 1320 and be amongst the finest in England.

Another beautiful Bristol church, that everyone interested in architecture should see, is St. Mary Redcliffe, the tapering and lofty spire of which marks it for notice. And there is much else of interest in Bristol City.

The road to Bath is a pleasant one. The town has been called the "Queen of the West." It is famous for its picturesqueness; the fact that so many notable people have made it their home throughout the centuries; for its healing waters; Roman remains; and the possession of the only hot mineral springs in Great Britain.

Its beautiful Abbey Church, commenced in 1500 by Bishop King and Prior Birde, dates in foundation as a lineal descendant of a College of Secular Canons founded by Offa, King of Mercia, as long ago as A.D. 775. The See to

which it is attached is that of Bath and Wells. In 1245 it was decided to join the two places, the bishop to be elected by the monks of Bath and the Canons of Wells. The Abbey has a great added interest from the fact that it is the last complete ecclesiastical building erected prior to the Dissolution of the Monasteries.

Notable is the beauty of the richly carved West doors, which, dark with age, bear the mantles and shields of the Montagues—the family of the donor—and of the Bishop of Bath and Wells. loftiness, length and symmetry of the Abbey Church at once strikes beholders; and the visitor is always attracted to the finely preserved Chantry Chapel of Prior William Birde (1499-1525), beautiful with stone carving and fan-traceried roof. The vaulting of the choir should be particularly noticed, 76 feet above the pave-It is of entrancing beauty, and has been likened to the "interlacing branches of giant palms of a tropical forest." walls of the Abbey are crowded with interesting memorials of notable people of the seventeenth and eighteenth centuries, when the church was a favourite place of burial; and Richard Brinsley Sheridan wrote a truism when he penned the words,

"There's snug lying in the Abbey!"
St. Alphege, once, according to "The Golden Legend," a monk of Deerhurst, near Gloucester, came to Bath Abbey to lead a more contemplative life. He eventually became Archbishop of Canterbury, and was martyred by the Danes at Greenwich in 1014.

Through Trowbridge and Westbury to Salisbury is a pleasant road. Here one has a cathedral not only of surpassing beauty but the most perfect realisation of English Gothic untouched by foreign influence. It rises majestically from a green, encircled by giant elms and limes and surrounded by walls, here and there broken by ancient gateways, which were built largely with stone from Old Sarum. The magnificent octagonal spire rises to a height of 404 feet above the ground on which the Cathedral stands.

The building is wonderfully graceful and light in appearance, and it contains a perfect wealth of chantries, chapels, cloisters and Chapter House, which give interest to the noble building. The latter, however, suffered considerable injury by a lack of judgment in George III., who appointed one James Wyatt, the designer of the Royal baths at Windsor and Weymouth, to restore the great Cathedral!

Salisbury is a pleasant town, which somehow or other, like other cathedral cities, seems to have drifted rather than progressed. One leaves it with regret, with the lofty spire following one for a long distance, and then, by way of Andover, Newbury, Reading and Maidenhead, return to town.

#### CONVENIENCE $\mathcal{A} \ N \ D \qquad C \ O \ M \ F \ O \ R \ T \qquad I \ N$ MOTOR CAR DESIGN.

By Charles L. Freeston.

With Interesting Comparisons and Word Illustrations.

OT debates are waged from time to time as to the benefits or otherwise which have accrued to motor-car design from the influence of racing. one who witnessed the classic struggles for the Gordon Bennett Cup in the early years of the present century, and of the Grand Prix contests that followed, I am prepared to contend à les deux mains that, had there been no racing the touring car of to-day would have been many, many degrees below its present state of efficiency, durability and reliability, but that in one single respect, rarely if ever mentioned, the influence of racing has been wholly to the bad. I refer to the question of ground clearance and a very low centre of gravity as to which the requirements of the racing man are diametrically opposed to those of the ordinary tourist.

For the former class it was necessary, of course, as the power and speed of cars increased, to build very low chassis in order to reduce to the minimum the possibility of overturning at corners by centrifugal force. On a cement track, it is true, the banking comes to the driver's aid, but on the road it was essential to keep the centre of gravity as low as possible, and even then races were sometimes won by the skill and judgment of an individual driver rather than by the outstanding merits of his machine. In the last Gordon Bennett race, in 1905, Théry's victory was attributed by experts to his exceptional skill at corners, at each of which he gained a fraction of time, which, multiplied by the number of laps and the number of corners on each lap, was sufficient to ensure his success against drivers of equally fast cars but possessed of less judgment and adroitness than his own.

The racing car of one year became the touring car of the next, for it had usually embodied some new and superior design in pistons, valves, lubrication, radiation or transmission, to say nothing of the achievements of the metallurgist. Immensely welcome. however, as were these mechanical improvements, there was small need, in my humble opinion, to go the whole hog and import into touring car design the exceeding "squatness" of the racing chassis. In everyday road work a driver is not thinking in terms of fifths of seconds and inches when rounding corners, nor has he the stimulus of a great prize in prospect to cause him to take the risks that are inseparable from a terrifically fought road race. Moreover, what does actually happen if on occasion he is in a particular hurry and is tempted to take a bend at too high a rate of speed? He skids! The action of skidding of itself saves the situation; for, instead of turning over, the car merely pirouettes. How often, in fact, does a car actually turn over, unless it hits a bank or an obstruction in the road? How often, indeed, does a car even perform the manœuvre, so beloved of short story writers and artists, of taking a corner on two wheels? I. for one, have been driving for twentyfive years, but I have never seen the fear accomplished—not even in the old days when cars had ultra-short wheelbases, absurdly top-hampered bodies, and were as wrong as wrong could be in nearly every respect.

Mechanical changes, it may also be remarked, have had some effect upon the question of ground clearance apart from the mere selection of a given limit for the height of the frame itself. Flywheels are now of much smaller diameter than of yore owing to the enormous degree to which engines have been speeded up and also to the use of six cylinders instead of four. Unfortunately, however, against the benefit of increased clearance which the smaller flywheel confers is to be set the fact that, in superseding the old-time chain transmission, the live axle introduced a new form of nether projection. Engine sumps, too, are now deeper than used to be the case. On some cars the sump is the point that is nearest the ground and in others it is the differential casing.

At this stage some comparatively new motorist may ask: "What is the matter with a low-ground clear-ance, anyway?" To this I feel bound to answer that the objections are many. For one thing, the narrower the outlet for the escape of air at the back of the car the more are its dust-raising qualities emphasised. This may be of less importance than formerly, so many of our roads being tarred, but dust is still an enemy to motorists and the public alike in many places, and the point is by no means negligible.

In the second place, a low ground clearance is dangerous. Its presence assumes that one is always going to travel on perfect roads, never encountering a deep caniveau, a high "donkey-back" or a stray obstruction in the road, and never have the misfortune to be ditched by the fault of some other person. As regards obstructions, I may mention in passing two curious experiences of my own. While touring through the Black Forest I was directed along a side road which gradually degenerated into a narrow uphill track, dotted with boulders. Suddenly the car came to a stop with a scrunching noise. We all dismounted, and found that the undershield was firmly wedged on a large boulder. Engine-power was of no use, for the driving wheels only skidded when the clutch was let in; equally futile were our efforts to push the car off by hand. Chartering the bough of a tree, however, from a woodman, and building up a pile of stones as a fulcrum, we were able eventually to lever up the car and set it free. On another occasion, in Italy, I was travelling towards Como in a violent storm, and came upon a place where the road was under repair, the centre being full of water. Drawing of necessity to one side, we found ourselves suddenly stalled; the differential casing was resting on soft earth and the wheels would not drive. A

#### GROUND CLEARANCES AND WHEELBASES.

friendly labourer brought up some planks and we managed to get away, meanwhile having got thoroughly soused in the semi-tropical downpour. Probably an extra inch of clearance in the chassis would have been sufficient, on each of these experiences,

to prevent the contretemps.

Thirdly, a low chassis prevents the fitting of tool-boxes in what is otherwise absolutely the most convenient place-namely, on the under side of the running boards. True it is that this is sometimes done, and I have even travelled abroad on a car thus equipped; but the risks are considerable. Even if one is never ditched, one may be under the necessity of backing into soft and sloping ground when turning in a very narrow road, with the result that the tool-boxes strike the earth.

Among other objections that might be raised is the notorious fact that one of the chief difficulties of selling British cars in the colonies is the fact that their ground clearance is not high enough for the negotiation of spruits or for up-country work generally

According to the evidences of the recent Olympia Show, there is even now a considerable discrepancy between one maker's idea of the desirable ground clearance and another's. The maximum that I encountered on a British car was 10 inches, the lowest point in this case being the sump; the chassis generally was higher, and much above the average in fact, but to my thinking it had a particularly dignified appearance. On the other hand, I saw numerous chassis that were not only conspicuously lower in themselves but had battery boxes and other things incorporated with the design in a manner that one could only regard as distinctly dangerous.

But if the cultivation of the "low centre of gravity" idea has reached undesirable limits in respect of the chassis themselves, what is to be said as to their superstructures—the carriage bodies? To the serious tourist the general run of open bodies are veritable nightmares. They serve well enough, perhaps, for London to Brighton journeys, but for long distance travelling, continuously from day to day, they are the last word in discomfort. The back-rests offer no support to the body above the

waist, and anyone who has sat in a car for 150 or 200 miles at a time wants something for his shoulders as well. There is surely a happy medium to be struck between the present standards, which conform more or less to the boat ideal, and the old-fashioned "Roi des Belges" bodies that were designed for the comfort of a luxury-

loving monarch.

It is worth while considering, moreover, what might be achieved with higher bodies in the way of greater convenience for the carrying of tools, spares, and luggage. When gravity feed was ousted by pressure feed the space previously occupied by the petrol tank beneath the front seats opened up a glorious opportunity for the housing of all imaginable tools, pump, jack, spare tubes, etc., etc. Ere long, however, the bodies were built so low that, in order to obtain any back-rests at all, the space beneath the seats was more and more curtailed until, in some instances, it disappeared altogether. taneously the formerly available space beneath the back seats grew "smaller by degrees and beautifully less" until that, too, was relegated to limbo.

As a result, it is impossible on many modern cars to find anywhere to stow inner tubes in a satisfactory way, and oftener than not the tyre pump has to be placed on the mat in the rear

portion of the car.

As for luggage carrying, there is still an entire absence of any effort to cope with the problem, except where the requirements of the owner permit him to use a twe-seater car. from the fact that the tail of the body can be built flat and accommodate luggage accordingly, enough impedimenta, as a rule, for two persons could be carried on a grid. But with four-seater cars there is not only twice as much luggage to be carried but no flat tail to be made use of; and, just because the problem is full of difficulties, it is usually burked altogether. Even a luggage grid is not invariably offered as a standard fitting, but must be ordered as an extra.

Now it is obvious that nothing much can be expected in the way of convenient fittings on cheap cars built to a price, nor does the short wheelbase of the II h.p. model lend itself to luggage carrying roominess. Even in that instance, however, more use might be made of the running boards, which could easily be made a little wider. The valances, moreover, should be pierced with strap-holes, but at Olympia I did not see a single car, large or small, that had this provision, and only one in which slots for straps had been provided on the side plat-

When we come to consider the car with very long wheelbases, it seems extraordinary that advantage is not taken of this otherwise superfluous length to increase the comfort of the rear passengers and provide the means for luggage carrying at the same time. At present they are exposed to all manner of draughts as well as cut off from conversation with their front companions. If, on the other hand, the rear seats were set further forwardas could easily and most advantageously be done on a long chassisthe passengers would be rendered more comfortable because they were sitting within the wheelbase, and there would be space behind the rear panel for a luggage platform or a large "boot." Many a chassis is so long that extra seats can be placed inside the body to convert the car into a six-seater, but if the long chassis is a sine quâ non to start with, by reason of the power of the engine, much better use could be made of the opportunity by shortening the body in the way above described.

So far as concerns ground clearance, higher seats, higher back-rests, and wider running boards, it is all a matter of degree, of course, and no one wishes to return to the monstrosities The present of twenty years ago. ideal, however, of flattening a car to the utmost possible limit is in every way inconvenient and even absurd, while an extra inch or two here and there would effect a substantial amelioration in respect of comfort and convenience alike.



### A MOTOR CIRCUIT OF THE ARDENNES.

By Demetrius C. Boulger.

A Tour in the Land of Castles, Cathedrals, and Châteaux.

OR convenience the Ardennes may be defined as the region bounded on the north and west by the river Meuse, on the south by France and on the east by the Grand Duchy and the Eifel. It is traversed in all directions by excellent motor roads. and the Touring Club de Belgique has published an admirable Carte Routière. The region can be entered from the northwest at Namur or the north-east at Liége as best accords with the visitor's plans, but here it is assumed that he will choose the former. At the same time it involves a slight departure from the geographical limit as the road from Namur lies on the left bank of the Meuse as far as Dinant. But no one will think they have seen the Ardennes at all if Dinant of tragic memories is not placed at the head of the programme.

The valley of the Meuse above Namur is not without its own charm. The river itself is broader and finer than the Moselle, and the historical associations

are not uninteresting.

The road hugs the river bank and soon after passing the old Citadel, now the centre of a public park, the extensive woods of Dave with the modernised château close to the stream come into view. In the background high up on a plateau lies the fort which was not proof against the monster shells of the Austrian siege guns. Above Dave appear the islets of Godinne, and then comes the picturesque village of Yvoir where the Bocq stream, which supplies Brussels with its best drinking water, flow sinto the Meuse. After this the interest passes to the left bank. Here is the ruined castle of Creveceur from whose battlements three ladies threw themselves to escape capture during the siege of 1554, and then comes Bouvignes, once the haughty rival of Dinant, but now a humble village. In a few minutes the car will be passing through the left bank suburb of St. Medard, and then a sharp turn to the left and across the bridge into Dinant

The aspect of Dinant is well known, and war has not touched its main features. There is still the long range of cliff, 300 ft. above the town, as a background, and at its northern extremity the old Citadel presents an imposing form, while the much damaged but restored Gothic church of Notre Dame nestles under its shelter. But the town itself is changed. It has risen from its ashes, but the long line of houses are horribly new and much of the old charm of the city of the dinan deries has gone perhaps for ever. can be spared it is well worth while to climb the 400 odd steps to the Citadel for the sake of the view.

Beyond Dinant the visitor has a choice of routes. He may decide to proceed by Beauraing straight to Bouillon, or by Celles and Ciergnon to Rochefort. latter is the preferable course because it admits of an early visit to the remarkable Han grottoes which are the greatest natural curiosity in the Ardennes, and afford a unique experience. But before starting on the main route it is advisable to make a detour by Anseremme to see the junction of the Lesse, the picturesque château of Walzin and the caves of Eurfooz although this means retracing one's steps to regain the main road. This passes through the pine woods and preserves of the Château d'Ardenne, no longer a royal domain, but a first-class hotel, and then we come to the still



The picturesque old houses and bridge of Montjoie—on the river Roer.

royal château of Ciergnon, which King Albert uses as his residence in the Ar-The Lesse at Ciergnon is well wooded, and on the opposite bank are the preserves of the old Château of Villers which is supposed to be the original home of that family in both its Belgian and British branches. From Ciergnon the high road leads straight into Rochefort, while the Lesse curves in a southerly direction. Rochefort, where there are two excellent hotels, may be recommended for the first night's rest after a run of about sixty miles including detours.

This allows of a visit to the Han grottoes for the following morning. It is preferable for this excursion to use the steam tramway, instead of the car, as it is only by so doing that the fine view of the Rochers de Faule can be obtained. Four hours in all should be allowed for the journey and visit which is sure to leave a lasting impression. After the midday dinner, the custom throughout the Ardennes, a fresh start may be made, this time for St. Hubert. The route passes the old château of Mirwart and then through the finest part remaining of the old forest. The church of St. Hubert is interesting but need not detain one long, and then the car may be headed straight for Bouillon via Poix, Libin, and This second stage is also one of about sixty miles. At Bouillon the Hotel des Postes, near the bridge over the Semois, is the right one. It was here that the Emporer Napoleon III passed a night on his way to Germany after Sedan. The great attraction at Bouillon is the old castle, much of which is exactly as it was when the youthful owner, Godfrey of Bouillon, defended it successfully long before he became famous as the leader of the Crusaders who captured Jerusalem. At one of the embrasures there is shown the stone seat from which he is said to have surveyed the surrounding country. There are many charming prospects round Bouillon and the woods are lovely, but these are only possible for the pedestrian. By extending the stay at Bouillon to two nights a short run can be made by Rochehaut to Alle and the heights of Corbion, and thence by the grande route to Sedan to visit the battlefield and the memorials.

This has the advantage of giving a clear day for the long run to Bastogne. The route skirts the French frontier,

#### LEGENDS, TRADITIONS, AND THRILLING STORIES.

passes the château of Amerois, the residence of the late Count of Flanders, King Albert's father, and only reaches the Semois at Chassepierre. Near this place is what is considered the gem of the Semois valley, the section between La Cuisine and Chiny. This has to be explored in punts called barquettes, and an hour's delay is well repaid. There is nothing further to detain one, and a straight run may be made by Neufchâteau and Longlier for Bastogne, where there is a good hotel.

From Bastogne the next morning an early start should be made for La Roche. The direct road is by Longchamps, but the more picturesque is by Tenneville and Champlon which reaches the old capital of the Ardennes by the fine descent from Beausaint. There are two good hotels at La Roche, and the afternoon may be well employed in exploring the grand woods by which it is surrounded, not overlooking the old château in the centre of the town and the curious natural simulacrum of another kind of château named after the Devil. La Roche is situated on the Ourthe, which is scarcely less sinuous than the Semois, and divides into two branches a short distance above the old town.

Five, or four, nights have now been accounted for and it is necessary to prepare the mind for fresh scenes. The glorious woods through which the Lesse, the Semois and the Ourthe make their way

do not extend to the east beyond the outskirts of La Roche. An ascent of 1,500 ft. to Samrée and the Baraque de Fraiture in about eight miles has to be faced, and then a bare and uninviting plateau extends to distant horizons. Fraiture is the second highest point in Belgium, ranking atter the Baraque de Michel in the Hautes Fagnes, which is, however, less than 100 ft. its superior. From the Fraiture there is a descent of about 500 ft. to Salm Château, and thence by Viel Salm, Petit Thier, and Ligneuville Malmédy is reached. Malmédy, which was restored to Belgium at the Peace, may be recommended for the night after a run from La Roche of about fifty miles,

From Malmédy an excursion should certainly be made to the mediæval town of Montjoie, although it is still in Prussian territory, and for that reason it is necessary to inquire at Malmédy as to the precise regulations enforced. The route runs by Waismes and the Elsenborn camp, now a Belgian Bordon, to Kalter Herberg and Montjoie. Montjoie, the scene of some Frank victory of which the record is lost, owes its rococo buildings as well as its prosperity to French immigrants who settled there at the end of the seventcenth century. The river Roer flows through its streets and sometimes under its houses. It is the same Roer that flows into the Meuse at Rure-monde, in Holland. There is an excellent hotel, that called La Tour, and the

visitor wi'l find it difficult to tear himself away from so charming a spot. The territory of Mentjoie is the home of legend. A tributary of the Roer is the charming Perlenbach, which derived its name from the pearls found in its waters. The pearls have long disappeared, but a brown trout, small but succulent, remains for capture

for capture. It is best to return to Belgium by the same route, passing again through Mal médy for its sister town of Stavelot. a thousand years Stavelot and Malmédy were joined together under the rule of a Prince Abbot. At Stavelot there is one of the best provincial hotels in Belgium, called the Orange. The old Abbey building still exists and is used as a In the parish church is the hospital. tamous reliquary of St. Remacle, who was Bishop of Liege in the seventh century and the converter of the savage denizens of the Ardennes. Some of the silver statuettes which ornament this beautiful specimen of the fourteenth century handicraft were stolen some years ago, but were happily recovered. Stavelot is a clean and flourishing townlet and a convenient centre for many interesting excursions. It stands on the river Amblève, which is famous for its trout fishing, and which may some time or other verify the old belief that it flows through a bed of gold. The fishing at Stavelot itself is not good, owing to the numerous tanneries, but both above it at Ligneuville



### HOTELS THAT ONCE WERE ROYAL RESIDENCES.

and below it from Trois Ponts to Comblain, where it joins the Ourthe, it is first rate. A favourite excursion from Stavelot is that to the Cascade at Coo, and the road by the Amblève past La Gleize, Strumont, Remouchamps, Aywaille and Comblain is one of the best in the country. From Comblain there is the high road to Liége, a twelve mile run. The Amblève valley is It has famous in Belgian tradition. associations with the Four Sons of Aymon and their famous steed Bayard, with the Wild Boar of the Ardennes, and other notabilities. The ruins of their castles mark the cliffs above the valley, while the picturesque château of Montjardin with its hanging gardens combines the ancient and the modern in perfect harmony.

Despite the attractions of the Amblève valley it is probable that the call of Spa will draw the visitor away from the Amblève. On leaving Stavelot the car will turn northwards for Francorchampsanother name derived from the Frank period. Here a short halt should be made to examine the scene of one of the first German atrocities in the Great War—the massacre of Francorchamps. Spa is too well known to require description, but if any stay is made there it is easy to visit the Amblève either at Coo or at Stoumont by the Hoegne. In an opposite direction there is a pleasant run to La Gileppe, the national reservoir which was constructed for the benefit of the cloth industry of Verviers. The barrage is surmounted by

an enormous stone lion typifying Belgium. The run can be extended to Eupen, now a Belgian possession and renamed Neau. It is easy to return by Dolhain for the purpose of visiting the old capital of Limbourg, once besieged and captured by Marlborough, but long dismantled. On leaving Spa for Liége, to conclude the journey, the route follows the Wayai till it joins the more important Hoegne, which is a tributary of the Vesdre. Near Theux is the ruined castle of Franchimont, the seat of the Margraves of that name. Readers of Quentin Durward will remember that the men of Franchimont hastening to the aid of Liége nearly accomplished the dramatic surprise of the camp of Charles the Bold and Louis XI, which is so well narrated in that novel. Scott did not tell of the summary revenge Charles took soon afterwards when he sacked and destroyed the place, carrying off many prisoners of both sexes whom he threw into the Meuse from the old bridge at Liége. Scott does, however, refer in his Lays to another tradition: "Dids't e'er, dear Heber, pass along

Beneath the towers of Franchimont,
Which like an eagle's nest in air
Hang o'er the stream and hamlet fair?
Deep in their vaults, the peasants say,
A mighty treasure buried lay,
Amassed through rapine and through
wrong

By the last Lord of Franchimont."
The treasure was said to be contained

in an iron chest upon which the Devil sat in guard. None the less for superstitious dread, extensive excavations were made many times until at length the tradition died out under repeated failure and is now only the subject of local ridicule.

If there is time there is one final run that can be recommended to complete the circuit. Instead of entering Liége the Meuse may be reached at Seraing, where the Cockerill Company has its headquarters in the old Summer Palace of the Prince Bishops, and thence proceeding up the Meuse Huy will be reached in less than an hour. Here is a good hotel, the Aigle Noir. The old Collegiate Church of Notre Dame, much of which has come down unaltered from the early fourteenth century, is full of interest. but the old castle holds nothing to reward the climb to it. Here was the monastery of Neumoustier from which Peter the Hermit emerged to preach the Crusades. At Huy the Hoyoux flows into the Meuse, and the visitor is invited to explore its beautiful Here are some of the finest vallev. châteaux left in Belgium-Modave and Emptinne, for instance—and nowhere are the coverts better stocked or preserved. This is the region called Condroz, and as an object of attraction there lies at the southern extremity the well concealed Durbuy with the Duc d'Ursel's fine château on an islet in the River Ourthe. Durbuy seen it only remains to head the car for Ciney and Namur.



E



### CHRISTMAS ANGLING.

#### By Kenneth Dawson.

There are few more delightful ways of spending one of the fine warm days, such as December brings occasionally, even in this climate of ours, than with rod and line; and the motor-owner is in the happy position of being able to choose the best waters, usually miles from the permanent way, without considering travelling difficulties.

TTHOUGH other attractions rather overshadow, perhaps, the importance of Christmas as an angling holiday, there is much good fishing to be had, and many species of fish are in their primest condition around about the festive season.

The game fish of the salmon family are not, it is true, with one exception, available, for both the silvery salmon and the speckled trout are in the midst of spawning, and are lank, black creatures, very different from the same species at Whitsun. The solitary exception is the grayling, sometimes called the Queen of the Stream, and fragrant Thymallus, a gleaming bar of silver shot with wondrous purple reflections, and redolent of sweet thyme, is at her best, for she, like the coarse fish, is a spring spawner, and does not begin to be troubled with family affairs until about April.

Unlike trout, grayling do not care for very rapid or boisterous water. Their favourite haunts are glassy glides where the stream is from two to four feet in depth, with an even flow, and a shingle or gravel floor. When the water is high wet fly-fishing will pay best, the flies being cast straight across stream and allowed to sweep round until under the near bank. A trout only occasionally rises a second time at a fly it has once missed, but a grayling may have half a dozen shots, and be hooked in the end, and it is always worth while to try a short rising fish several times before passing on. For winter fly-fishing there are few better patterns than Red Tag, Orange Bumble and Wickham's Fancy. Sometimes grayling flies are tied with a white kid tag to imitate a gentle.

In the North of England not many grayling will be killed with fly in winter unless the weather is unusually mild, and the angler must resort to bait fishing. The two best tit-bits for tempting Thymallus are small worms and gentles, the latter being, of course, a polite name for maggots.

"Swimming the worm" is much practised in the North, and is very successful in cold, frosty weather. The tackle consists of a three-yard, fine gut cast and a small hook. A large shot is pinched on to the cast about a foot above the hook, and a tiny cork float is adjusted so that the worm is about six inches from the bottom. A small redworm or brandling is the bait, and this is allowed to swim down stream with the current, the angler striking at the slightest check to the float. When gentles are used, two or three may be impaled on a small hook and cast and fished like a fly.

Of the several species of coarse fish those most likely to interest the Christmas angler are roach, perch, chub and pike, and the latter has, perhaps, the strongest claims to be called the Christmas fish. Christmas is a time of ghost stories and legends, and somehow the pike seems to fit in with all this. Its very ferocity and daring compel our admiration, and there is something truly great in the utter disregard of danger which it displays at times. In very early days its origin was thought to be shrouded in mystery. Even Izaak Walton, following the example of Gesner, and other early writers on Ichthyology, averred that the fish was bred from pickerel weed. He says: "This weed, and other glutinous matter, with the help of the sun's heat, in some particular months, and some ponds apted for it by Nature, do become pikes."

By Christmas most of the weeds will have disappeared, and one can pursue Esox in the most sporting manner by spinning an artificial devon or phantom. Or perhaps an even more effective lure is a dead dace or gudgeon mounted on spinning tackle. This is the sport par excellence for the winter months, for one is moving about the whole time, and can keep pleasantly warm, which is not always possible when angling for other coarse fish. The largest pike,

however, will probably fall to live baiting, for these monsters are too lazy to dash after a spinning lure, and are more likely to succumb to the attractions of a fat dace mounted on snap tackle, and allowed to swim slowly around close to where the "dread tyrant of the watery plain" lies in ambush.

The perch is a hard fighting fish which provides much sport for the Christmas angler, and it, too, will take a spinning lure, which should be quite small and very bright. Paternostering with a minnow, or small gudgeon, is another good method, and float fishing with a well-scoured lobworm is perhaps the best plan if there is any colour in the water. Perch shoal in winter, and where one has been caught there are likely to be others.

Roach are pursued in many ways. In winter light leger tackle, with a lobworm for bait, or float tackle with gentles or small worms, are usually effective. If the water is low and clear, roach haunt the deeper holes, but when the stream is in flood they will be found in quite shallow reaches.

The chub is another good winter fish which may be caught with either float or leger tackle. The best baits are lobworms if the water is coloured, and cheese, greaves, bullocks' pith and macaroni in clear water. Chub lie in the shelter of the bank, and love holes amongst under-water roots, and the vicinity of a bridge is always a likely spot for a big 'un.

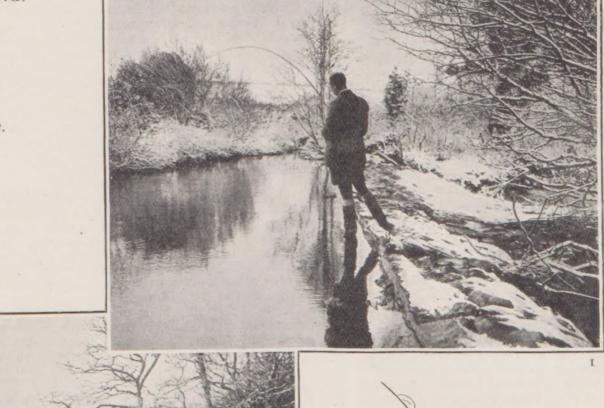
For the sea-angler the cod is the most important fish at Christmas time. In the autumn enormous shoals of codlings come inshore, and feed amongst the breakers, especially on the North and East coasts. As the year draws to a close the larger fish put in an appearance, and by Christmas twenty and thirty-pounders can be caught by casting from the shore with paternoster tackle baited with lugworms, mussels, sprats or herrings.

## THE CALL OF THE STREAM.

#### CHRISTMAS ANGLING.

- I. A Likely Spot.
- 2. Grayling Fishing.
- 3. Spinning for Pike.













### BROADCASTING BUSINESS BREVITIES.

#### The Maharajah of Travancore.

The Wolseley Motors, Ltd., announce that they have been favoured with an order from the new Maharajah of Travancore for a 24/55 h.p. Wolseley landaulette. The late ruler was also a user of Wolseley cars and his last purchase was a special 20 h.p. landaulette with all fittings heavily gold plated.

#### Twenty-two, and Still Running!

A Chinese gentleman from Singapore recently visited the Wolseley Motor Works at Adderley Park, Birmingham. In the course of conversation he said that his father purchased the first Wolseley taken into Malaya. "He bought a 7 h.p. Wolseley two-cylinder horizontal when he came over for King Edward's Coronation in 1902. It is still running very well, although the engine has a slight knock!!"

#### More Price Reductions.

As a result of the success of the 10/23 h.p. four-cylinder Talbot evinced at the Olympia Show, the manufacturers are in the fortunate position of having sufficient orders on their books to ensure a larger production in 1925 than was originally anticipated.

This increased production naturally means reduced manufacturing cost, and it has been decided to reduce the price of the chassis and complete cars of this model by £15, so that the prices from now onwards will be as follows: Chassis, £300; two-seater, £350; four-seater, £350; coupé, £415; saloon, £450; Weyman Saloon, £450.

Messrs. Clement Talbot, Ltd., are also

Messrs. Clement Talbot, Ltd., are also very pleased to be able to announce that the price of the 12/30 h.p. six-cylinder

chassis and complete cars will be reduced forthwith by £25, the prices now being as follows: Chassis, £440; two-seater, £550; four-seater, £550; coupé, £600; all-weather, £640; saloon, £725; Weyman saloon, £725.

These price reductions will

take effect forthwith, and all purchasers who have placed orders for the 10/23 h.p. four-cylinder or for the 12/30 h.p. six-cylinder Talbot models from November 1st will get the benefit of the reductions announced.

#### A Luxurious Production.

To Rome on a Sunbeam is the title of a luxurious publication just received from the Sunbeam Motor Car Co., Ltd., and it consists of jottings from the diary of a motorist who, with two companions, made a winter trip from London to Rome on a six-cylinder Sunbeam car. Beyond the fact that

they set out to reach the Eternal City within eighteen days of their departure from Piccadilly and to see as much of mediæval France and Italy as possible en route, they had no fixed plans. Similarly the records made by the "Diarist" have no set purpose or formality; but as the spontaneous jottings of an enthusiastic motorist they reveal in an entertaining way the remarkable manner in which the modern touring car brings the romance of Continental history and present-day life within easy reach of the dwellers in Britain; and especially to such of those who, like these three travellers, may not be able to spare more than a month from home or business. The "Skipper," who drove, and the "man with the camera," whose existence is more than justified in the beautiful pages of this booklet, are each keen that other motorists should try the tonic effect of so exhilarating a trip as the Sunbeam gave them. For the booklet itself, it is printed in various colours and altogether beautifully produced-but there, all Sunbeam products are works of art!

#### A New Garage.

On November 24th last Mr. E. J. Glue opened the Bridge Garage, Clarence Street and Market Square, Staines, The function served the double purpose of enabling nearly 100 guests to inspect a most up-to-date building and to join in the celebration of Mr. Chas. H. H. Glue's twenty-first birthday. The garage is Mr. E. J. Glue's gift to his son, and from personal investigation we can say that it is one of the best equipped garages in the south of England.

There is ample accommodation for forty cars, full equipment for the execu-

tion of all kinds of repairs, and, what is of great importance in the winter months, central heating throughout.

At the moment Mr. Glue is the agent for Buick and Singer Cars, and the Norton motor cycle; other well-known cars and motor cycles will very shortly be added to the list.

As Mr. Glue is also proprietor of the Blue Anchor Hotel in Staines, motorists can be comfortably catered for in this picturesque hostelry, while their cars are garaged free in the adjoining building.

There is no doubt that the Bridge Garage fills a long-felt need in Staines and the surrounding district, and Mr. Glue's enterprise should meet with the success it deserves.

#### A Praiseworthy Performance.

A stock Chrysler Six phaeton car has recently covered 1,000 miles in 1,007 minutes—or, deducting necessary stops for petrol, oil, tyre changes and food for the driver, in a net time of 878 minutes 10 seconds, and an average speed of 68,381 miles per hour.

The car, driven by Ralph de Palma, was chosen from stock by representatives of the Los Angeles Times, the paper that offered the trophy which the Chrysler won. The running time was clocked and certified by three members of the American Automobile Association. As traffic conditions prevent such a test on highways, this performance was achieved on the Fresno race track, which, however, is no better than an ordinary highway, and in places not so good.

Endurance in high speed work was the real test. And a thousand miles run at an average speed of 68.381 miles per hour tells a story of amazing endurance.

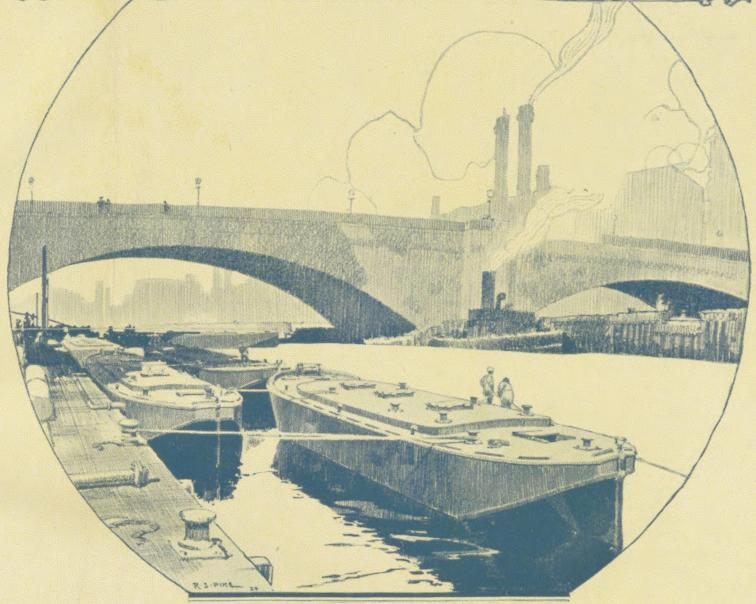
> It is one thing to show a burst of speed for a mile or so, but quite another to hold that speed for a thou-sand miles. The first takes power alone—the second power plus unprecedented endurance. A car with destructive vibration could not stand a thousand miles at 68 miles an hour. An engine with anything but a perfect oiling system would be wrecked long before it travelled a thousand miles with throttle wide open, and a car with anything but a perfect cooling system could not possibly keep cool at top speed for fourteen hours. It logically follows that a stock car which can stand 68 miles an hour for a thousand miles has the perfection of design, reserve, ability and endurance to make it stand up for an abnormally long time under ordinary usage.



MIDDLETON HALL, the administrative offices of Scottish Oils, Ltd., refiners of B.P. motor spirit for the Scottish market. This ancient mansion house has been converted into offices, with its amenity preserved, The photograph also shows some of the officials' houses.



## Pratts National Service Series



#### INLAND WATER TRANSPORT

IN conveying Pratts Spirit to the various distribution centres throughout the Kingdom, the Anglo-American Oil Co., Ltd., avails itself of every means of safe and economical transport. The illustration above shows a few of the Barges that transport Pratts Spirit in bulk from quay-side to inland centres.

This series of announcements is to convey some idea of the comprehensive distributive organisation of the Anglo-American Oil Co., responsible for the maintenance of the supply of Pratts Spirit to thousands of garages and a million motorists. Watch for the next of the series.

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